

# HITACHI

## SERVICE MANUAL

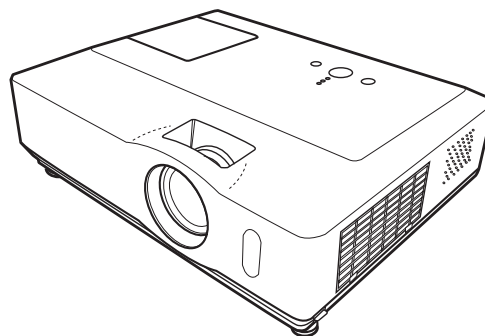
**SM0591**

**CP-X205WF (C14-20N)**

**CP-X305EF (C14-25N)**

### **Warning**

The technical information and parts shown in this manual are not to be used for the development, design, production, storage or use of nuclear, chemical, biological or missile weapons or other weapons of mass destruction or military purposes or purposes that endanger global safety and peace. Moreover, do not sell, give, or export these items, or grant permission for use to parties with such objectives. Forward all inquiries to Hitachi Ltd.



### **Caution**

Be sure to read this manual before servicing. To assure safety from fire, electric shock, injury, harmful radiation and materials, various measures are provided in this Hitachi Multimedia LCD Projector. Be sure to read cautionary items described in the manual to maintain safety before servicing.

### **Service Warning**

1. When replacing the lamp, avoid burns to your fingers, the lamp becomes very hot.
2. Never touch the lamp bulb with a finger or anything else. Never drop it or give it a shock as this may cause bursting of the bulb.
3. This projector is provided with a high voltage circuit for the lamp. Do not touch the electric parts of power unit (circuit) and power unit (ballast) after turning on the projector.
4. Do not touch the exhaust fan during operation.
5. The LCD module assembly is likely to be damaged. When replacing the LCD LENS/PRISM assembly, do not hold the FPC of the LCD module assembly.
6. Use the cables which are either included with the projector or as specified.

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**SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.**

## Multimedia LCD Projector

**July 2007**

## 1. Features

- High Brightness
- Low Noise
- Remote Control Via Your Web Browser
- Rich Connectivity
- Powerful Sound

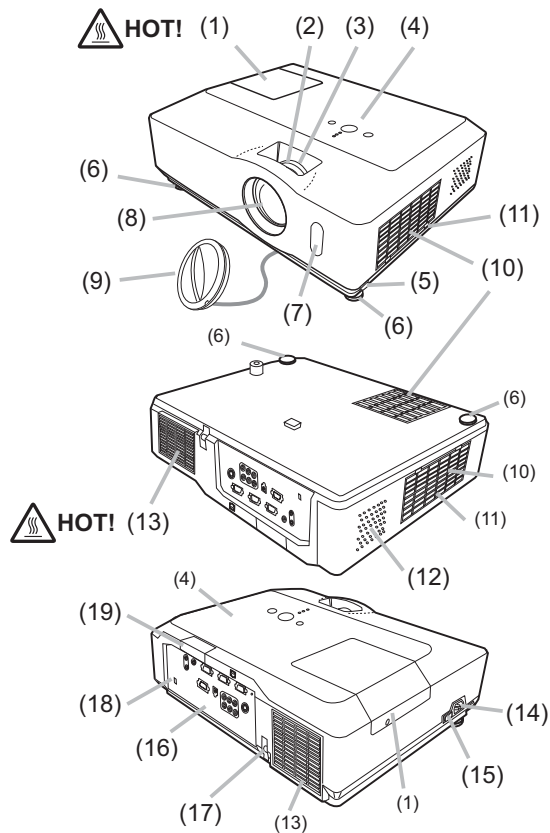
## 2. Specifications

|                      |                  |                                |                                                                                                                                                                      |
|----------------------|------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Liquid crystal panel | Drive system     |                                | TFT active matrix                                                                                                                                                    |
|                      | Panel size       |                                | 1.6cm (0.63 type)                                                                                                                                                    |
|                      | Number of pixels |                                | 1024 (H) x 768 (V)                                                                                                                                                   |
| Lamp                 |                  |                                | 220W UHB                                                                                                                                                             |
| Computer signal      | Computer IN      | 1                              | Video: Analog 0.7Vp-p (75Ω termination)<br>H/V sync: TTL level (positive/negative)<br>Composite sync: TTL level                                                      |
|                      |                  | 2                              |                                                                                                                                                                      |
|                      | Computer OUT     |                                | Video: Analog 0.7Vp-p, 75Ω output impedance (positive)<br>H/V sync: TTL level (positive/negative)<br>Composite sync: TTL level                                       |
| VIDEO signal         | VIDEO IN         |                                | 1.0Vp-p (75Ω termination)                                                                                                                                            |
|                      | S-VIDEO IN       |                                | Y signal: 1.0 ±0.1Vp-p, (75Ω termination)<br>C signal: 0.286 ±0.1Vp-p (NTSC burst signal, 75Ω termination)<br>0.3 ±0.1Vp-p (PAL/SECAM burst signal, 75Ω termination) |
|                      | COMPONENT VIDEO  | Y                              | 1.0 ±0.1Vp-p, 75Ω termination (positive)                                                                                                                             |
|                      |                  | C <sub>B</sub> /P <sub>B</sub> | 0.7 ±0.1Vp-p, 75Ω termination (positive)                                                                                                                             |
|                      |                  | C <sub>R</sub> /P <sub>R</sub> | 0.7 ±0.1Vp-p, 75Ω termination (positive)                                                                                                                             |
| AUDIO signal         | AUDIO IN 1       |                                | 200mVrms, 47KΩ or more (max 2Vrms)                                                                                                                                   |
|                      | AUDIO IN 2       |                                |                                                                                                                                                                      |
|                      | AUDIO IN 3 L/R   |                                | 200mVrms, 47KΩ or more (max 2Vrms)                                                                                                                                   |
|                      | AUDIO OUT        |                                | Output impedance 1KΩ (max 2Vrms)                                                                                                                                     |
| Audio output         |                  |                                | 7W                                                                                                                                                                   |
| Power supply         |                  |                                | AC100~120V/3.5A, AC220~240V/1.5A                                                                                                                                     |
| Power consumption    |                  |                                | 320W                                                                                                                                                                 |
| Dimensions           |                  |                                | 340 (W) x 117 (H) x 270 (D) mm (Not including protruding parts)                                                                                                      |
| Weight               |                  |                                | 4.0Kg                                                                                                                                                                |
| Temperature range    |                  |                                | Operation : 5~35°C<br>Storage : -20~60°C                                                                                                                             |
| Accessories          |                  |                                | Remote control x1<br>RGB cable x1<br>Power leads x3<br>Batteries x2<br>User's manuals x1<br>LENS CAP and STRAP x1<br>Soft case x1<br>Audio/Video cable x1            |

### 3. Controls

#### ● Projector

- (1) Lamp cover  
The lamp unit is inside.
- (2) Focus ring
- (3) Zoom ring
- (4) Control panel
- (5) Elevator buttons (x 2)
- (6) Elevator feet (x 2)
- (7) Remote sensor
- (8) Lens
- (9) Lens cover
- (10) Intake vents
- (11) Filter cover  
The air filter and intake vent are inside.
- (12) Speaker
- (13) Exhaust vent
- (14) AC inlet
- (15) Power switch
- (16) Rear panel
- (17) Security bar
- (18) Security slot
- (19) Slot cover  
The internal clock battery is inside.



⚠ **WARNING ►HOT!** : Do not touch around the lamp cover and the exhaust vents during use or just after use since it is too hot.

► Do not look into the lens or vents while the lamp is on since the strong light is not good for your eyes.

► Do not handle the elevator buttons without holding the projector since the projector may drop down.

⚠ **CAUTION ►** Maintain normal ventilation to prevent the projector from over heating. Do not cover, block or plug up the vents. Do not place anything that can stick or be sucked to the vents around the intake vents. Clean the air filter periodically.

► Do not use the security bar and slot to prevent the projector from falling since it is not designed for it.

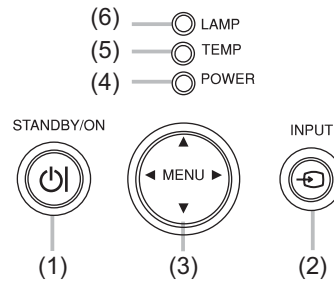
## CP-X205W (C14-20N) / CP-X305W (C14-25N)

### Control panel

- (1) STANDBY/ON button
- (2) INPUT button
- (3) MENU button

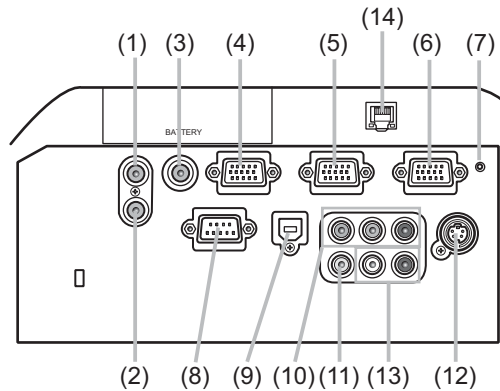
It consists of four cursor buttons.

- (4) POWER indicator
- (5) TEMP indicator
- (6) LAMP indicator



### Rear panel

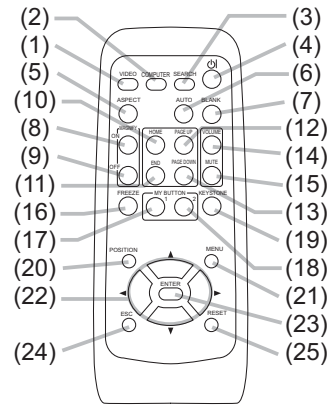
- (1) AUDIO IN1 port
- (2) AUDIO IN2 port
- (3) AUDIO OUT port
- (4) COMPUTER IN1 port
- (5) COMPUTER IN2 port
- (6) MONITOR OUT port
- (7) Shutdown switch
- (8) CONTROL port
- (9) USB port
- (10) COMPONENT (Y, Cb/Pb, Cr/Pr) port
- (11) VIDEO port
- (12) S-VIDEO port
- (13) AUDIO IN3 (L,R) ports
- (14) LAN port



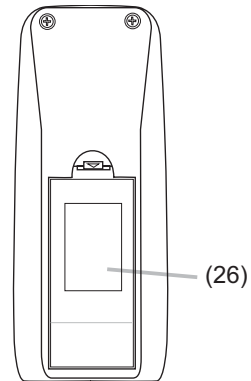
**CAUTION** ► Use the shutdown switch only when the projector is not turned off by normal procedure since pushing this switch stops operation of the projector without cooling it down.

## Remote control

- (1) VIDEO button
- (2) COMPUTER button
- (3) SEARCH button
- (4) STANDBY/ON button
- (5) ASPECT button
- (6) AUTO button
- (7) BLANK button
- (8) MAGNIFY - ON button
- (9) MAGNIFY - OFF button
- (10) HOME button
- (11) END button
- (12) PAGE UP button
- (13) PAGE DOWN button
- (14) VOLUME button
- (15) MUTE button
- (16) FREEZE button
- (17) MY BUTTON - 1 button
- (18) MY BUTTON - 2 button
- (19) KEYSTONE button
- (20) POSITION button
- (21) MENU button
- (22) ▲/▼/◀/▶ cursor buttons
- (23) ENTER button
- (24) ESC button
- (25) RESET button
- (26) Battery cover



Back of  
the remote control



**⚠WARNING ►** Do not look into the beam outlet and point the beam at people and pets while pressing the LASER button since the beam is not good for eyes.

**⚠CAUTION ►** Note that the laser beam may result in hazardous radiation exposure. Use the laser pointer only for pointing on the screen.

## 4. Adjustment

### 4-1 Before adjusting

#### 4-1-1 Selection of adjustment

When any parts in the table 4-1 are changed, choose the proper adjusting items with the chart.

Table 4-1: Relation between the replaced part and adjustment

| Replaced part           | Adjustment            |                     |                      |                     |                                |                                    |
|-------------------------|-----------------------|---------------------|----------------------|---------------------|--------------------------------|------------------------------------|
|                         | Flicker<br>(Chap.4-2) | Ghost<br>(Chap.4-3) | DC OFF<br>(Chap.4-4) | E-POS<br>(Chap.4-5) | White<br>balance<br>(Chap.4-6) | Colour<br>uniformity<br>(Chap.4-7) |
| Dichroic optics unit    | ○                     | ○                   | △                    | △                   | △                              | △                                  |
| LCD/LENS prism assembly | ○                     | ○                   | ○                    | ○                   | ○                              | ○                                  |
| MAIN board              | ○                     | ○                   | ○                    | ○                   | ○                              | ○                                  |
| Lamp unit assembly      | △                     | △                   | ×                    | ×                   | △                              | △                                  |

○ : means need for adjustment.    × : means not need for adjustment.

△ : means recommended.

#### 4-1-2 Setting of condition before adjustments

- Before starting adjustments, warm up projector for about 10 minutes.

Turn off the automatic keystone function in OPTION Menu.

If you changed [AUTO KEYSTONE] from [TURN ON] to [TURN OFF], set to the [TURN ON] after adjustment.

- Set Zoom Wide to Max. And project an image with more than 1m (40 inches) in diagonal size.
- Set the lens position to the centre using horizontal and vertical lens shift dials.
- Normalising the video adjustments

Press the [MENU] button to display the EASY menu. If Advanced menu comes up, move to the Easy menu.

Select the RESET in the EASY menu and press the [▶] or [ENTER] button to open the RESET dialog. Choose the EXECUTE with the [▲] button. Note that the projector will not allow you to reset its adjustment values with no signal input.

- Perform all adjustments from the FACTORY MENU. Operate as follows to display the FACTORY MENU.

#### When you use the remote control...

- Press the [MENU] button of the remote control to display the Easy menu. (If the Advanced menu appears, move to the Easy menu.)

- Select the RESET in the Easy menu, and then press the [▶] or [ENTER] button.

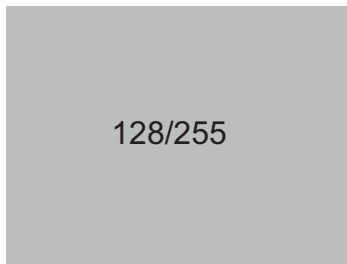
- Next, press the [RESET] button one time. And hold the [RESET] button for 3 seconds or longer (the FACTORY MENU will appear).

#### When you use the keypad of the projector...

- Press the [▲], [▼], [◀] or [▶] button of the projector to display the Easy menu. (If the Advanced menu appears, move to the Easy menu.)
- Select the RESET in the Easy menu, and then press the [▶] or [ENTER] button.
- Next, press the [▼] button one time. Then repress and hold the [▼] button together with the [INPUT] button for 3 seconds or more (the FACTORY MENU will appear).

## 4-2 Flicker adjustment (V.COM adjustment)

### Test pattern for the adjustment



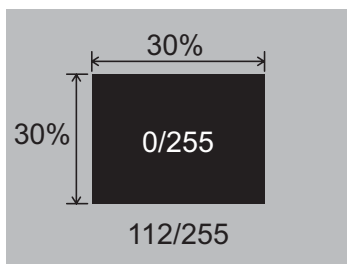
### Adjustment procedure

1. Use DAC-P - V.COM - R: in the FACTORY MENU to adjust so that the flicker at the centre of the screen is less than the flicker at the periphery. (When the flicker is about the same across the whole screen, adjust so that the flicker at the centre of the screen is somewhat less than elsewhere.)
2. In the same way, use DAC-P - V.COM-G: in the FACTORY MENU to adjust the G colour flicker.
3. In the same way, use DAC-P - V.COM-B: in the FACTORY MENU to adjust the B colour flicker.

NOTE: The test pattern shown on the left sometimes has a horizontal line across the screen.

## 4-3 Ghost adjustment

### Test pattern for the adjustment

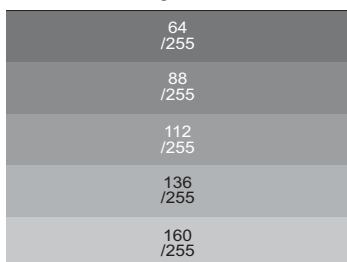


### Adjustment procedure

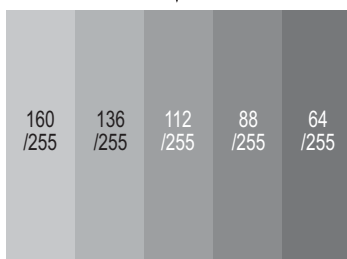
1. Make this adjustment after completing the adjustment in the section 4-2.  
Set 0 to the GHOST R, G, B in OPTION-SERVICE-GHOST Menu.
2. Use DAC-P - GHOST - R: in the FACTORY MENU to adjust so that R colour ghost is at a minimum. (Set the adjustment value to default, and then raise the value. When a ghost appears to the left of a vertical line, reduce the value by 6 steps.)
3. In the same way, use DAC-P - GHOST-G: in the FACTORY MENU to adjust so that G colour ghost is at a minimum.
4. In the same way, use DAC-P - GHOST-B: in the FACTORY MENU to adjust so that B colour

## 4-4 DC OFF adjustment (vertical bars adjustment 1)

### Test pattern for the adjustment



↑↓ Press ENTER key

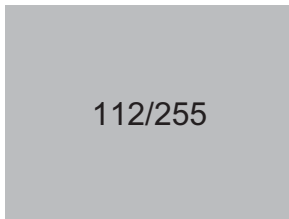


### Adjustment procedure

1. Make this adjustment after completing the adjustment in the section 4-3.
2. Use STRIPE - DCOFF - No. 0 - R : in the FACTORY MENU and use it so that vertical bars are minimised.
3. In the same way, use STRIPE - DCOFF - No. 0 - G : in the FACTORY MENU and use it so that vertical bars are minimised.
4. In the same way, use STRIPE - DCOFF - No. 0 - B : in the FACTORY MENU and use it so that vertical bars are minimised.

#### 4-5 E-POS adjustment (vertical bars adjustment 2)

##### Test pattern for the adjustment



##### Adjustment procedure

1. Make this adjustment after completing the adjustment in the section 4-4.
2. Use DAC -P - E-POS - R in the FACTORY MENU and use it so that vertical bars are minimised.
3. In the same way, select DAC-P - E-POS - G and use it so that vertical bars are minimised.
4. In the same way, select DAC-P - E-POS - B and use it so that vertical bars are minimised.

#### 4-6 White balance adjustment (visual inspection)

##### Preparations

1. Perform these adjustments after the adjustments described in Section 4-5.

##### Adjustment procedure

1. First, adjust the G colour.
2. Select GAMMA, SUB-CNT, and G: in the FACTORY MENU. If the background is white solid, press the [ENTER] key on the Remote control transmitter to change to [G] monochrome in the 33-tone greyscale.
3. Adjust GAMMA, SUB-CNT, and G: in the FACTORY MENU so that brightness of 33 steps is best.
4. Don't adjust GAMMA, SUB-BRT, and G: in the FACTORY MENU because we want to keep the best contrast ratio.
5. Then adjust colours R and B.
2. Reset gamma correction before adjustment.
  - Place the cursor on [GAMMA] in the FACTORY MENU, press the [RESET] key and select RESET.
6. Select GAMMA, SUB-CNT and G: in the FACTORY MENU. If the background is white solid, press the [ENTER] key on the remote control to change to [W] monochrome in the 33-tone greyscale.
7. Adjust GAMMA, SUB-BRT, R: and B: in the FACTORY MENU so that low-brightness white balance is best.
8. Adjust GAMMA, SUB-CNT, R: and B: in the FACTORY MENU so that middle-brightness white balance is best.
9. Repeat steps 7 to 8 above, and adjust so that brightness white balance of 33 steps is best.

## 4-7 Colour uniformity adjustments

### Preparations

1. Perform these adjustments after the adjustments described in the section 4-6.

2. Make a colour uniformity adjustments for the following tones.

- MIN tone (approx. 7% input signal)
- MID-1 tone (approx. 14% input signal)
- MID-2 tone (approx. 21% input signal)
- MID-3 tone (approx. 29% input signal)
- MID-4 tone (approx. 36% input signal)
- MID-5 tone (approx. 50% input signal)
- MID-6 tone (approx. 61% input signal)
- MAX tone (approx. 75% input signal)

NOTE: The brightness level of the test patterns in MID-4 and MID-6 is selectable.

3. Select the [C.UNIF.] in the FACTORY MENU and press the [▶] key. This operation displays the Adjust Tone menu (shown below) on the bottom of the screen.

To choose the tone to be adjusted, press the [▶] key and then use the [▲] or [▼] key.

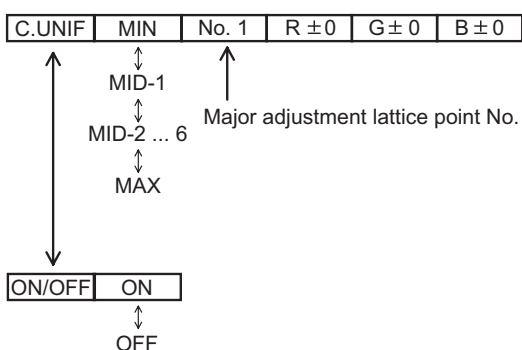
Select the major adjustment lattice point No. and colour and then adjust them.

4. The major adjustment lattice point numbers (a total of 17 points) corresponds to the major adjustment lattice point positions in the diagram on the right. The colour uniformity of the entire screen can be adjusted by adjusting the white balance for each of the points starting in order from the low numbers.

### FACTORY MENU

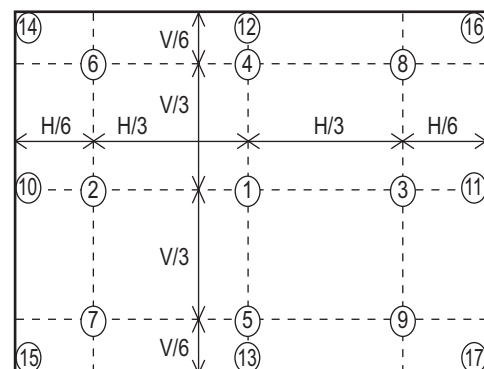
|          |
|----------|
| VID-AD   |
| C. UNIF. |
| DAC-P    |
| GAMMA    |
| STRIPE   |
| OPTION   |

### Adjust tone menu



- Adjustment point No.1 should not be adjusted, because it controls the brightness of the entire screen.
- To temporarily turn correction off, place the cursor on [C.UNIF.] in the Adjust Tone menu and press the [▼] key. The ON/OFF menu appears. Place the cursor on [ON] with the [▶] key and press the [▼] key. To turn it on again, place the cursor on [OFF] and press the [▲] key.
- Although this adjustment can also be made using internal signals, we will here use the [ENTER] key on the remote control to select the following two signals.
  - Solid monochrome adjustment colour (use G colour adjustment when a colour differential meter is used).
  - Solid white (use for adjustment other than above).
- Reset colour-shading correction before adjustment.
  - When resetting all values of 8 tones and all colours, place the cursor on [C.UNIF.] in the FACTORY MENU, press the [RESET] key and select RESET in the dialog.
  - When resetting only 1 tone, place the cursor on the tone such as MID-1 to be reset, press the [RESET] key and select RESET in the dialog.
  - Single tone and monochrome resets cannot be performed.

### Major adjustment lattice point position



## Adjustment procedure 1

### (When a colour differential meter is used)

1. First adjust the [MID-1] tone [G:].
2. Select adjustment point [No.2][G:].  
When the background is not [G] monochrome, press the [ENTER] key on the remote control to switch to solid [G] monochrome.
3. Measure the illumination at adjustment points No. 2, No.3, No.10 and No.11.  
The values should be:  
No.2 = Y2 [lx]      No.10 = Y10 [lx]  
No.3 = Y3 [lx]      No.11 = Y11 [lx]
4. No.2 and No.3 adjustment points have the average of Y2 and Y3.  
 $Y2 = (Y2 + Y3) / 2 \pm 2 \text{ [%]}$   
 $Y3 = (Y2 + Y3) / 2 \pm 2 \text{ [%]}$
5. No.10 and No.11 adjustment points have the average of Y10 and Y11.  
 $Y10 = (Y10 + Y11) / 2 \pm 2 \text{ [%]}$   
 $Y11 = (Y10 + Y11) / 2 \pm 2 \text{ [%]}$
6. Then adjust the [MID-1] tone [R] and [B].  
When the background is [G] monochrome, press the [ENTER] key on the remote control to switch to solid white.
7. Measure the colour coordinates of adjustment point [No.1] and make a note of them.  
Assume that they are  $x = x1$ ,  $y = y1$ .  
**Note:** When the CL-100 colour and colour difference meter is used, the  $[\Delta]$ (delta) mode is convenient. When adjustment point [No.1] colour coordinate has been selected, set the slide switch on the side to  $[\Delta]$ (delta) while holding down the [F] button on the front panel. The measurement shown after this displays the deviation from measurement point 1.
8. Measure the colour coordinates of measurement point [No.2] and adjust [No.2][R:] and [B:] so that the coordinates are as follows.  
 $x = x1 \pm 0.005$ ,  $y = y1 \pm 0.010$
9. Similarly, measure adjustment points [No.3] to [No.17] and adjust their colour coordinates starting in order from the small number points. This completes adjustments required for [MID-1].

**Note:** Since excessive correction may lead to a correction data overview during internal calculations, use the following values for reference.

[No.2] to [No.5]  $\pm 40$  or less

[No.6] to [No.9]  $\pm 50$  or less

[No.10] to [No.13]  $\pm 70$  or less

[No.14] to [No.17]  $\pm 120$  or less

10. Then adjust the [MIN] tone [G] so that the adjustment values are two times as much as [MID-1] tone [G] values.  
This completes [G] colour adjustments.
11. Then adjust [MIN] tone [R] and [B].  
Select [No.2] [B:] and press the [ENTER] key on the Remote control transmitter to change to solid white.
12. Measure the colour coordinates of adjustment point [No.1] and make a note of them.  
Assume that they are  $x = x1$ ,  $y = y1$ .
13. Now measure the colour coordinates of measurement point [No.2] and adjust [No.2][R:] and [B:] so that the coordinates are as follows.  
 $x = x1 \pm 0.005$ ,  $y = y1 \pm 0.010$  (Target)  
 $x = x1 \pm 0.020$ ,  $y = y1 \pm 0.040$
14. Similarly, measure adjustment points [No.3] to [No.17] and adjust their colour coordinates starting in order from the small number points.  
This completes [MIN] tone adjustments.
15. Now make similar adjustments for [MID-2] tone.  
(Adjust [MID-2] tone [G] so that the adjustment data set half as many as [MID-1] tone [G].)
16. Now make similar adjustments for [MID-3], [MID-5], [MAX] tones. (It is not necessary to adjust the [G] data in these tones.)
17. After completing the step 16, set the value of the [MID-4] tone [R]: [No.2] to the mean of the values of the [R]: [No.2] in the [MID-3] and [MID-4] tones.
18. Set all the values for the [No.2] to [No.17] of the [MID-4] tone [R] and [B] in the same way as the step 17.
19. Finally, set the data of the [MID-6] tone [R] and [B] using the values of the [MID-5] and [MAX] tones in the same way as the [MID-4] tone [R] and [B] adjustments in the step 17 and 18.

## Adjustment procedure 2

### (visual inspection)

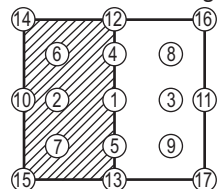
1. First adjust [MIN] tone [G:].
2. Select [No.2] [G:].  
If the background is [G] monochrome, press the [ENTER] key on the remote control to switch to solid white.
3. View measurement point [No.2] and [No.3].  
Lower the [G] colour intensity only of the colour point whose [G] colour is more intense than measurement point [No.1].
4. View measurement point [No.10] and [No.11].  
Lower the [G] colour intensity only of the colour point whose [G] colour is more intense than measurement point [No.1] and raise the intensity of the point whose colour intensity is lower than measurement point [No.1].
5. Now adjust the [MIN] tone for colours [R] and [B].
6. View measurement points [No.2], [No.3], [No.10] and [No.11]. Adjust the [R] and [B] of each measurement point so that they have the same colour as measurement point [No.1].

### Adjustment technique:

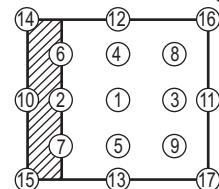
First, adjust [B:] of the point whose colour is to be adjusted so that it approximates that of [No.1]. If [R:] is low at this time, the image will have cyan cast, in which case [R:] is increased. On the other hand, if [R:] is excessive, the image will have a magenta cast, in which case [R:] is decreased.  
Overall a cyan cast makes it easy to see colour shading.

7. Next, view measurement points [No.4], [No.5], [No.12], [No.13] and make similar adjustments.
8. Then adjust measurement points [No.6], [No.7], [No.8], [No.9], [No.14], [No.15], [No.16] and [No.17]. This completes the [MIN] tone adjustments.
9. Make similar adjustments for other tones, except the [MID-4] and [MID-6] tones, as described in steps 1 to 8 above.

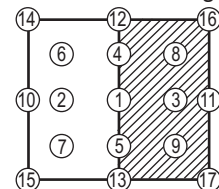
No. 2 deviation range



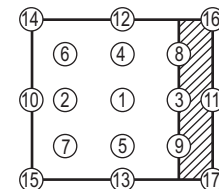
No. 10 deviation range



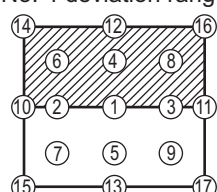
No. 3 deviation range



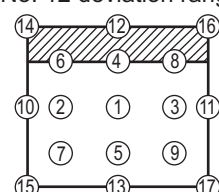
No. 11 deviation range



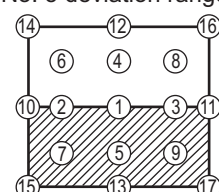
No. 4 deviation range



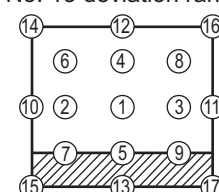
No. 12 deviation range



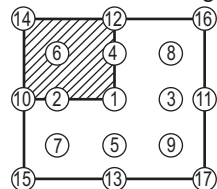
No. 5 deviation range



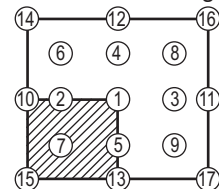
No. 13 deviation range



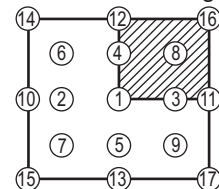
No. 6 deviation range



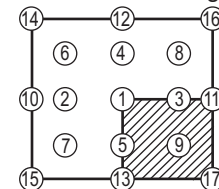
No. 7 deviation range



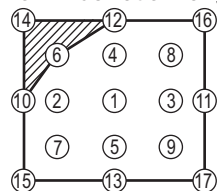
No. 8 deviation range



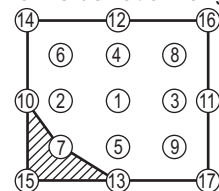
No. 9 deviation range



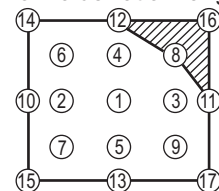
No. 14 deviation range



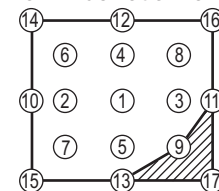
No. 15 deviation range



No. 16 deviation range



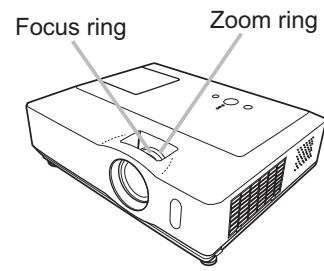
No. 17 deviation range



## CP-X205W (C14-20N) / CP-X305W (C14-25N)

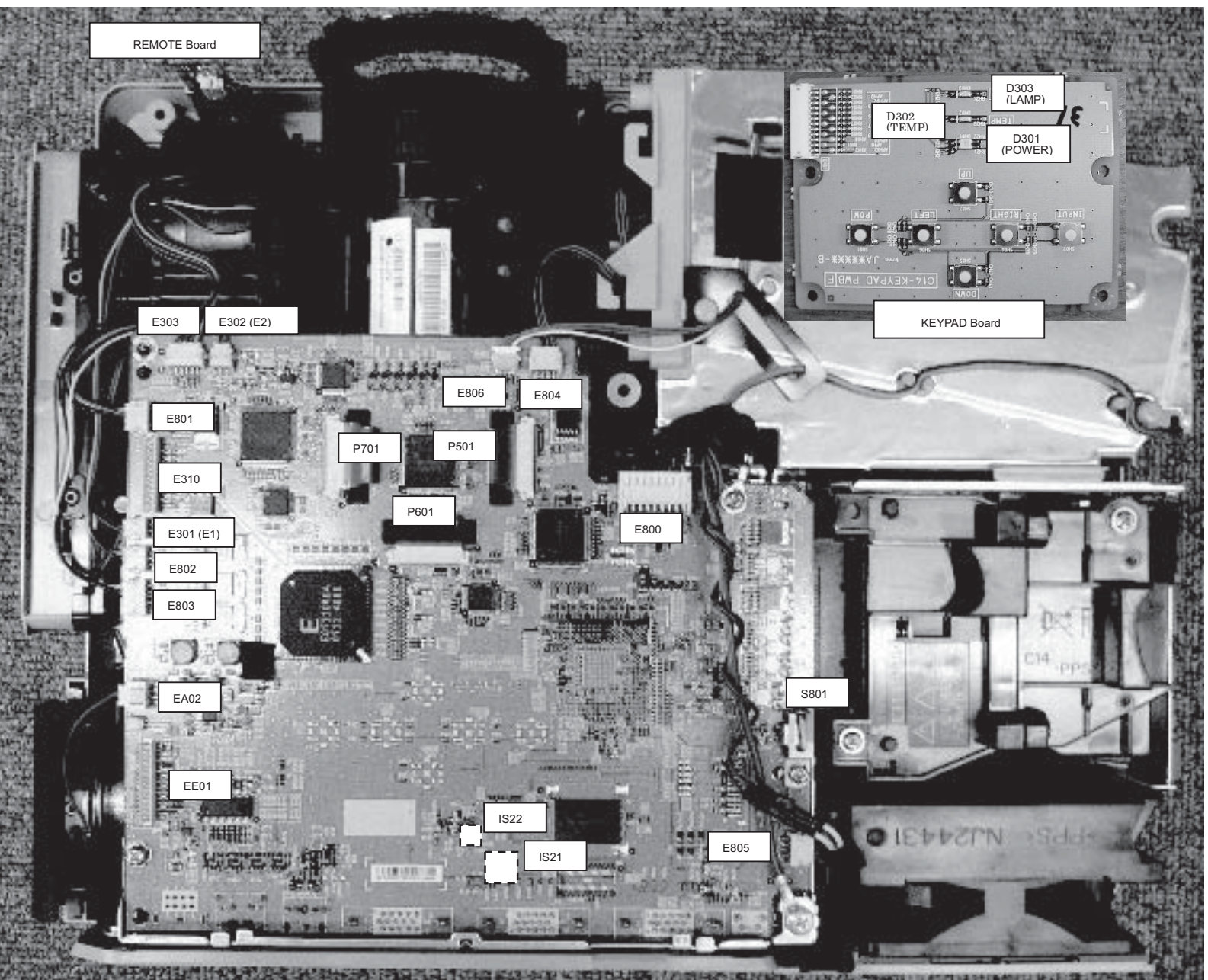
### 4-8 Adjusting the zoom and focus

1. Use the zoom ring to adjust the screen size.
2. Use the focus ring to focus the picture.

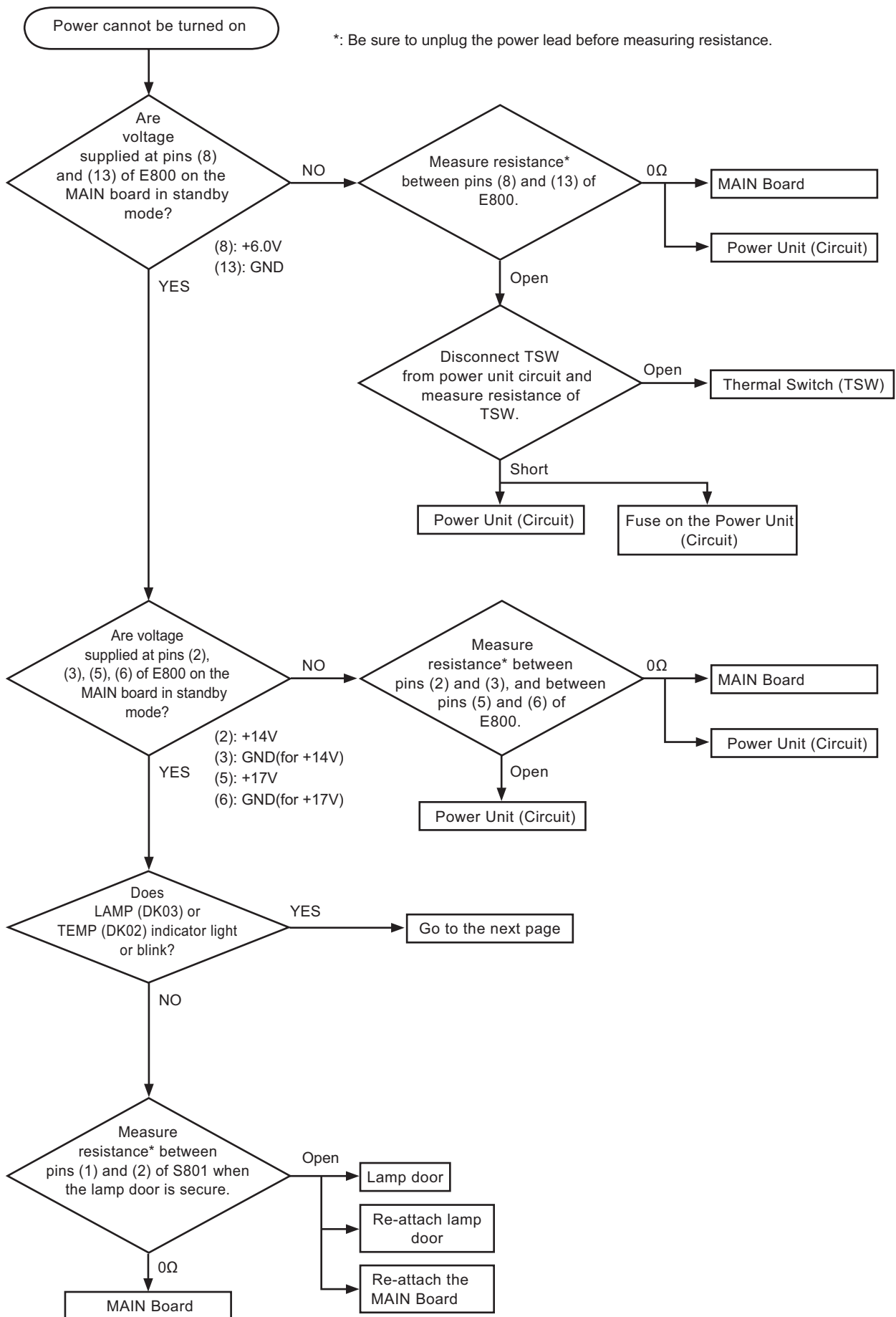


## 5. Troubleshooting

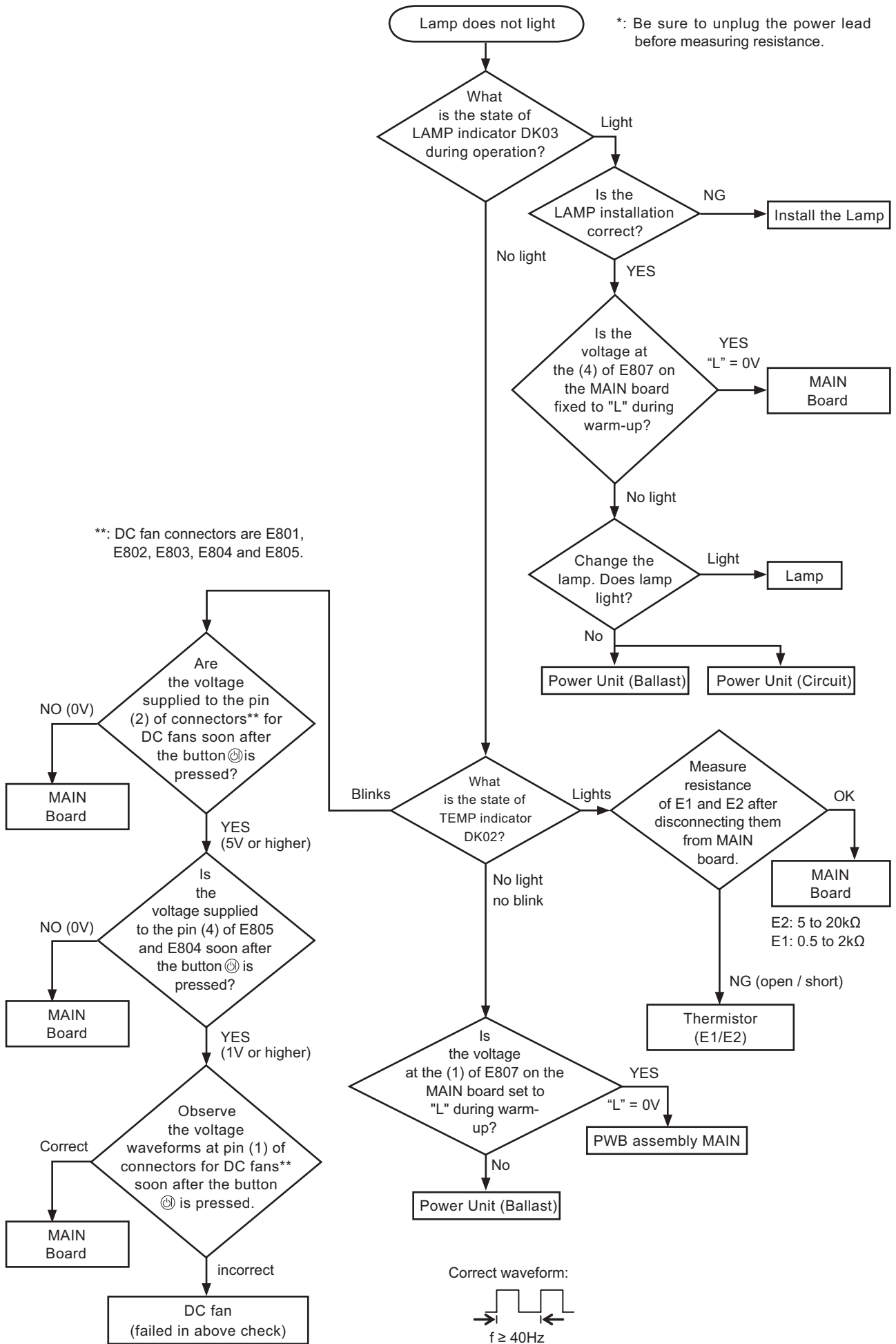
### Check points



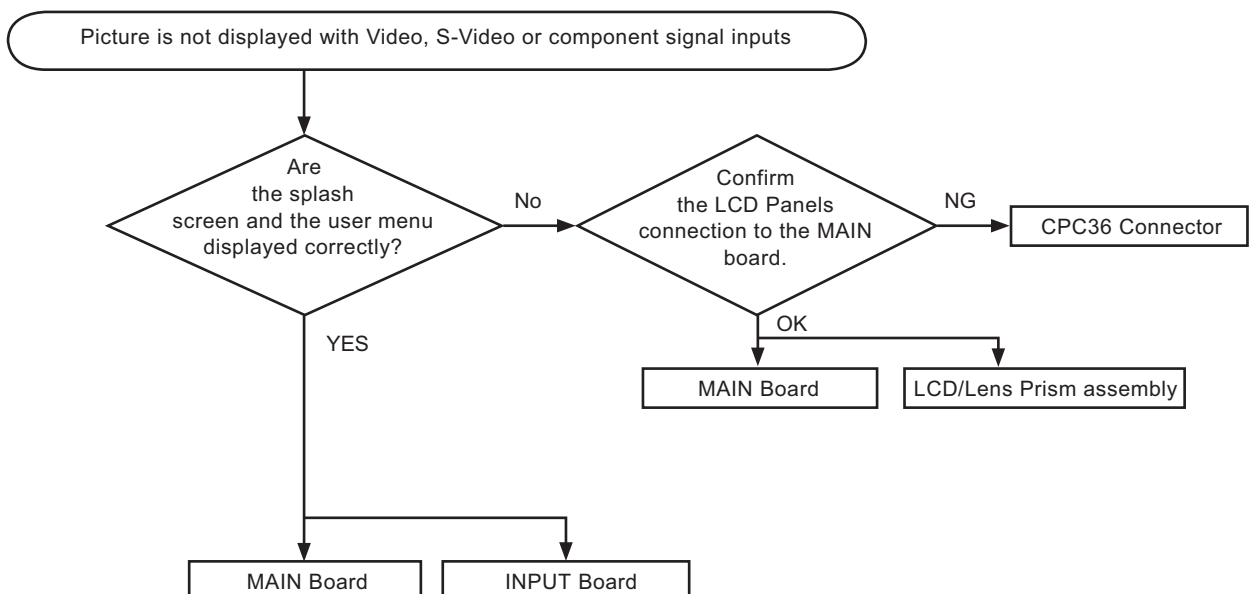
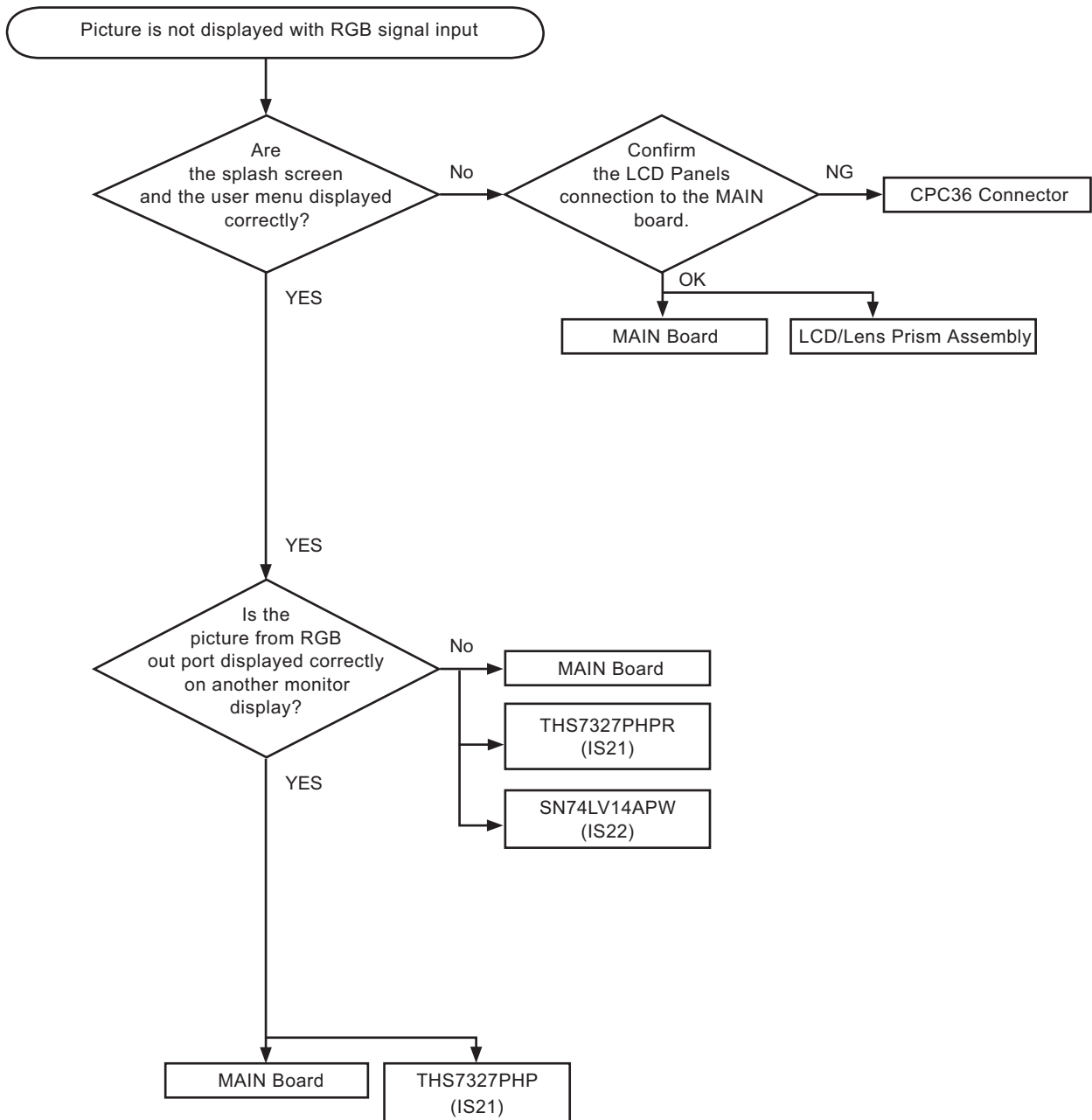
# CP-X205W (C14-20N) / CP-X305W (C14-25N)



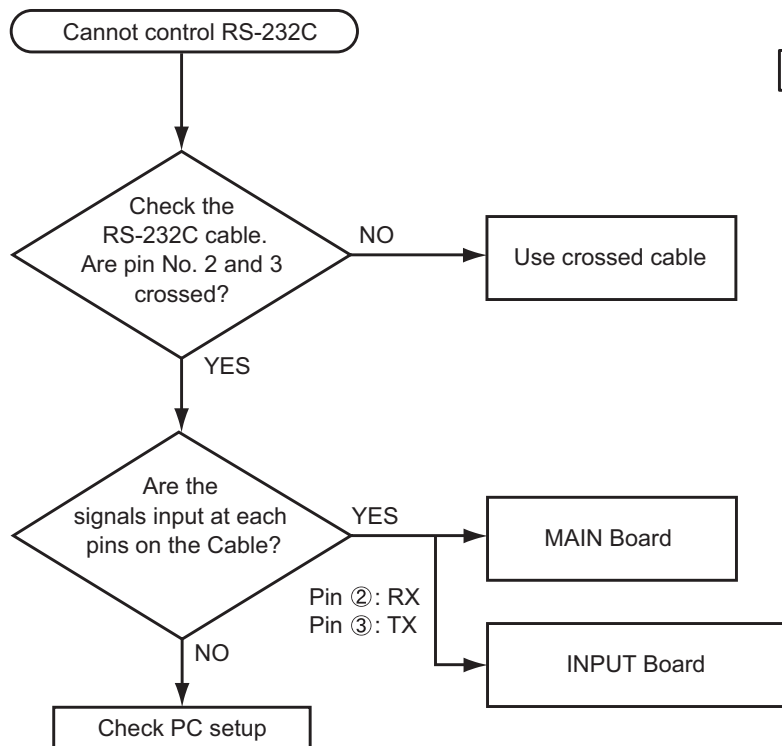
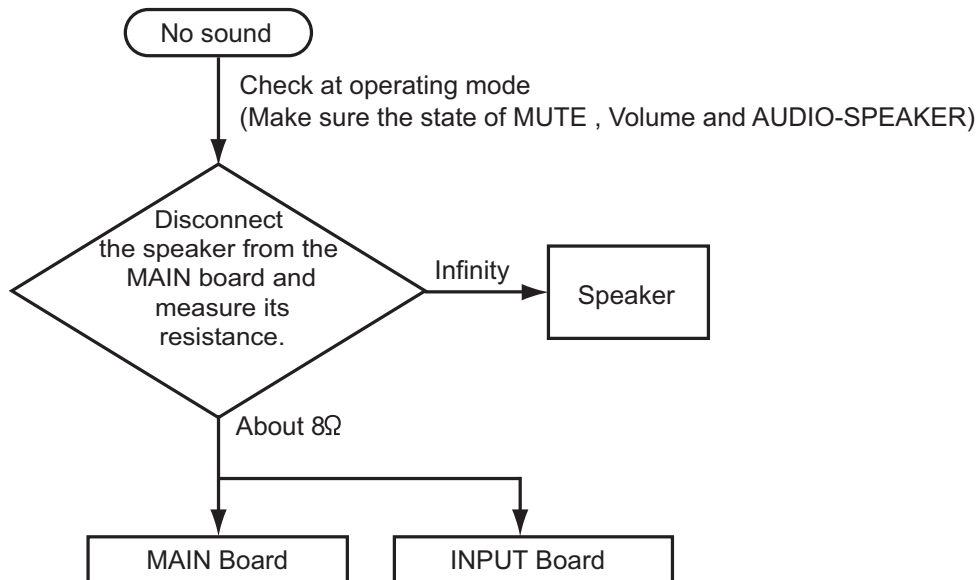
# CP-X205W (C14-20N) / CP-X305W (C14-25N)



## CP-X205W (C14-20N) / CP-X305W (C14-25N)



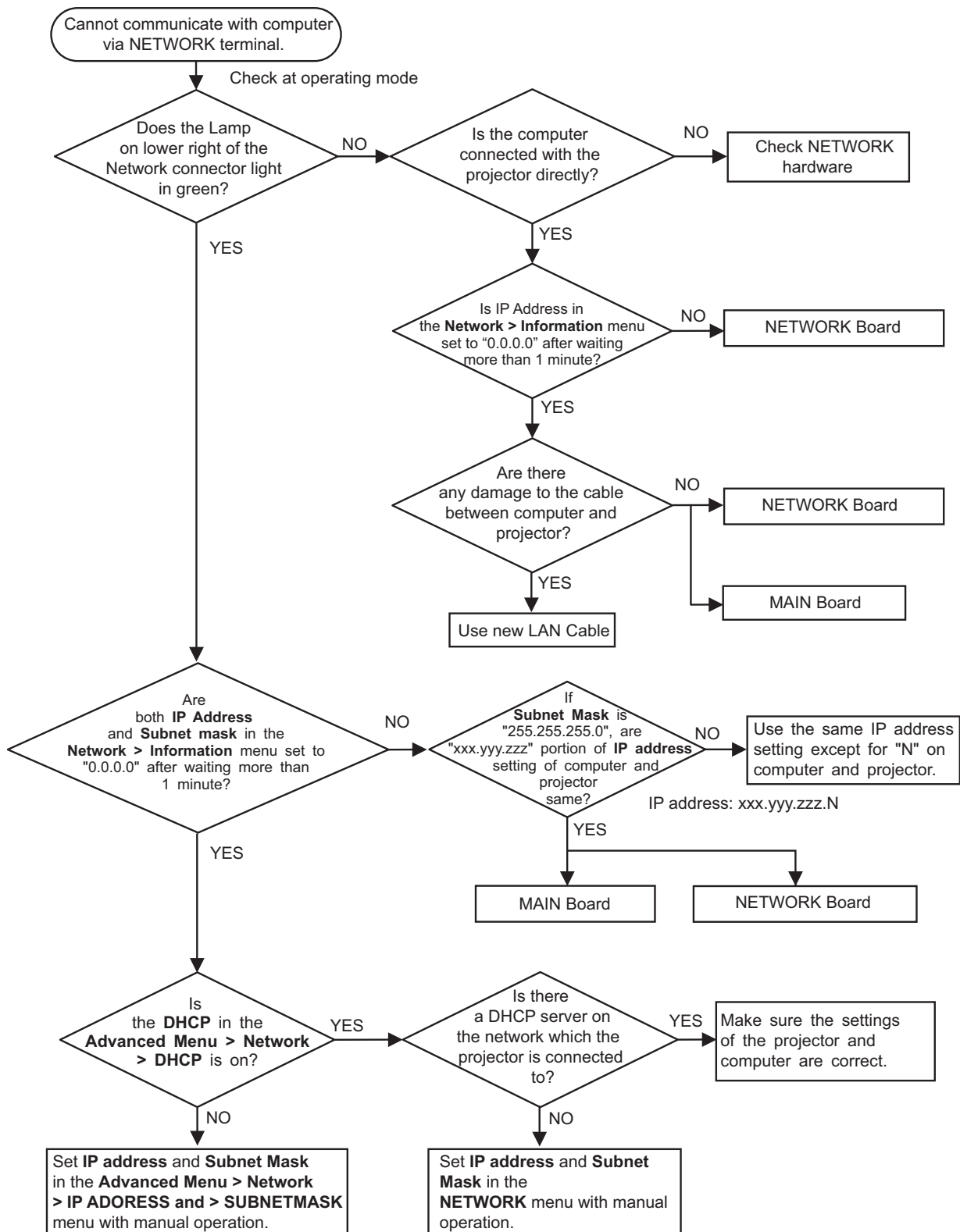
## CP-X205W (C14-20N) / CP-X305W (C14-25N)



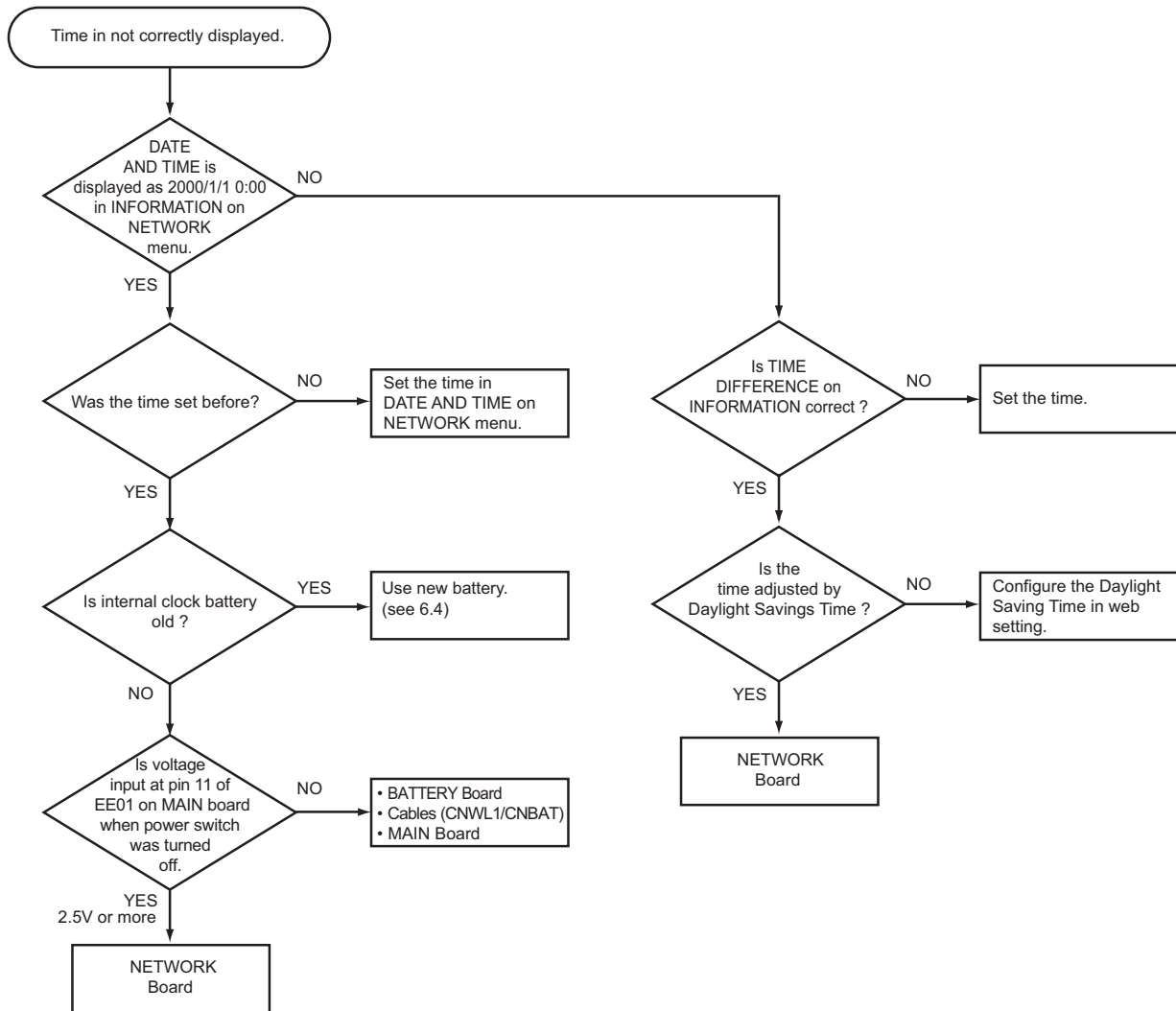
### The check after parts change

1. PC power supply OFF
  2. Connection of cable
  3. Projector starting
  4. PC starting
- \*When not operating :  
PC set up change of cable.

# CP-X205W (C14-20N) / CP-X305W (C14-25N)



## CP-X205W (C14-20N) / CP-X305W (C14-25N)



## 6. Servicing

### 6-1 Lead free solder [CAUTION]

This product uses lead free solder (unleaded) to help preserve the environment. Please read these instructions before attempting any soldering work.

#### CAUTION

Always wear safety glasses to prevent fumes or molten solder from getting into the eyes. Lead free solder can splatter at high temperatures (600°C).

#### ■ Lead free solder indicator

Printed circuit boards using lead free solder are engraved with an "F" or "LF".

#### ■ Properties of lead free solder

The melting point of lead free solder is 40-50°C higher than leaded solder.

#### ■ Servicing solder

Solder with an alloy composition of Sn-3.0Ag-0.5Cu or Sn-0.7Cu is recommended.

Although servicing with leaded solder is possible, there are a few precautions that have to be taken. (Not taking these precautions may cause the solder to not harden properly, and lead to consequent malfunctions.)

#### Precautions when using leaded solder

- Remove all lead free solder from soldered joints when replacing components.
- If leaded solder should be added to existing lead free joints, mix in the leaded solder thoroughly after the lead free solder has been completely melted (do not apply the soldering iron without solder).

#### ■ Servicing soldering iron

A soldering iron with a temperature setting capability (temperature control function) is recommended.

The melting point of lead free solder is higher than leaded solder. Use a soldering iron that maintains a high stable temperature (large heat capacity), and that allows temperature adjustment according to the part being serviced, to avoid poor servicing performance.

#### Recommended soldering iron:

- Soldering iron with temperature control function (temperature range: 320-450°C)

Recommended temperature range per part:

| Part                            | Soldering iron temperature |
|---------------------------------|----------------------------|
| Mounting (chips) on mounted PCB | 320°C±30°C                 |
| Mounting (chips) on empty PCB   | 380°C±30°C                 |
| Chassis, metallic shield, etc.  | 420°C±30°C                 |

#### The PCB assemblies which contain lead free solder

MAIN Board

REMOTE Board

INPUT Board

KEYPAD Board

BATTERY Board

NETWORK Board

POWER UNIT (BALLAST)

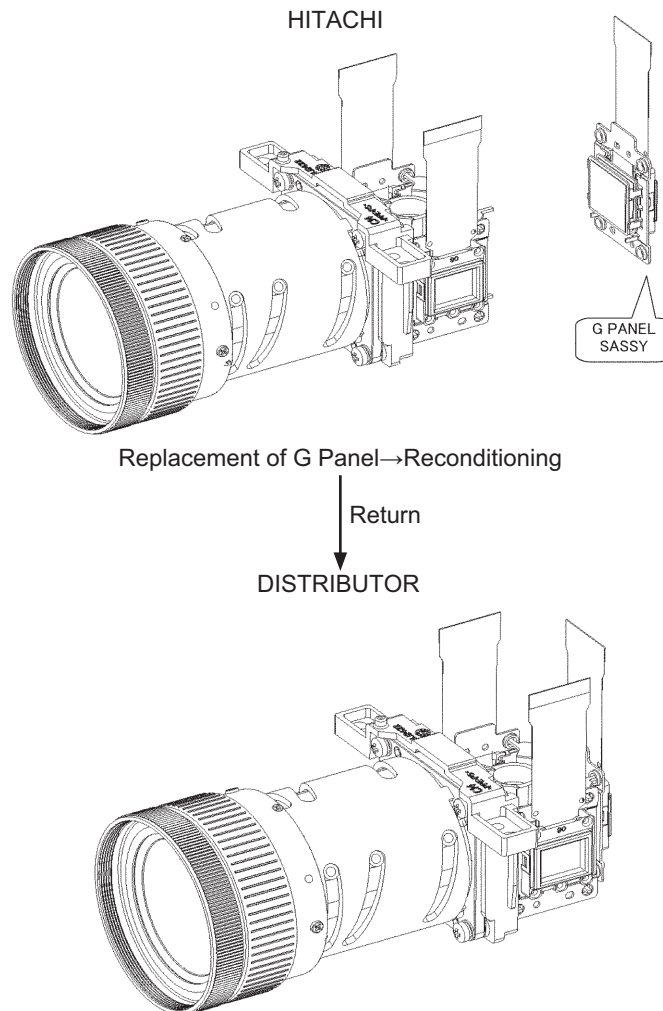
POWER UNIT (CIRCUIT)

## 6-2 Replacing The LCD/Lens Prism

You should not replace separately the parts of the liquid crystal LCD/Lens prism because it works properly only when used together. You can either replace the LCD/Lens prism assembly or send the whole unit LCD/Lens prism assembly back to HITACHI where we will replace the malfunctioning part, recondition the device and send it back to you.

Reset the PANEL TIME whenever you changed the LCD/LENS prism assembly. With reference to the PANEL TIME, see the section "6-13 HIDDEN SERVICE MENU" in this manual.

Do not disassemble the unit because replacement of separate parts is not possible.



## 6-3 Cleaning dust from panels and optical filters

### **⚠ WARNING**

Wear sunglasses to protect your eyes when you maintain the projector with its lamp on.

#### 1. Preparation

Prepare cleaning tools and materials as follows. Prepare a relatively clean room so as not to work in additional dust while performing the cleaning operation.

- (1) Swab for cleaning : P#: NX32451, "Cotton stick BB-014"
- (2) Air duster (Dust blower, spray can)
- (3) Vacuum cleaner

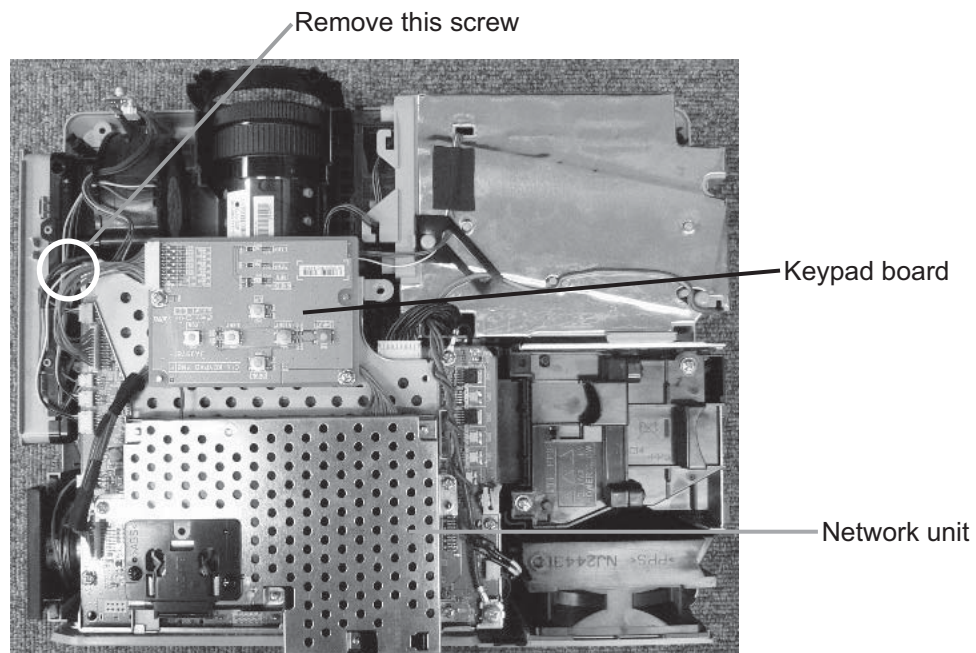
#### 2. Disassembly and setting up.

- (1) Turn off the projector and unplug the power lead.
- (2) Remove the lamp cover and upper case according to the disassembling diagram of chapter 8.

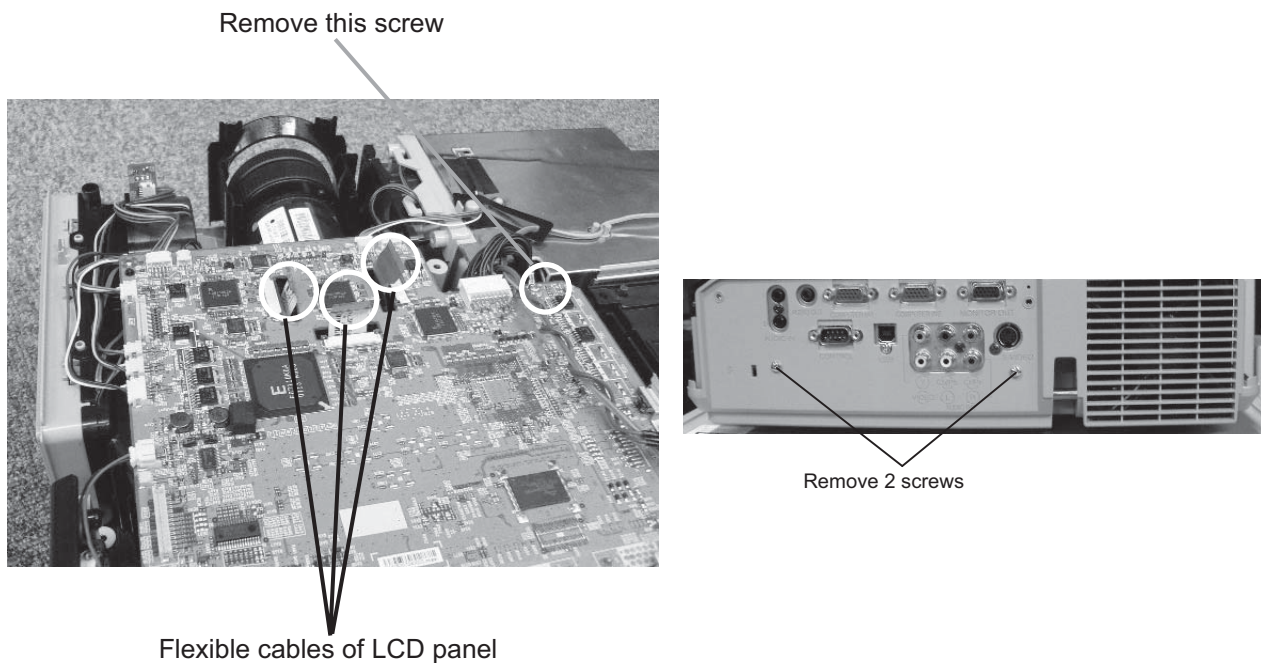
## CP-X205W (C14-20N) / CP-X305W (C14-25N)

(3) Remove the screw and detach the shield bracket.

You do not have to detach the Keypad board and Network unit.



(4) Disconnect the LCD panel flexible cables and unscrew MAIN board to make it free.



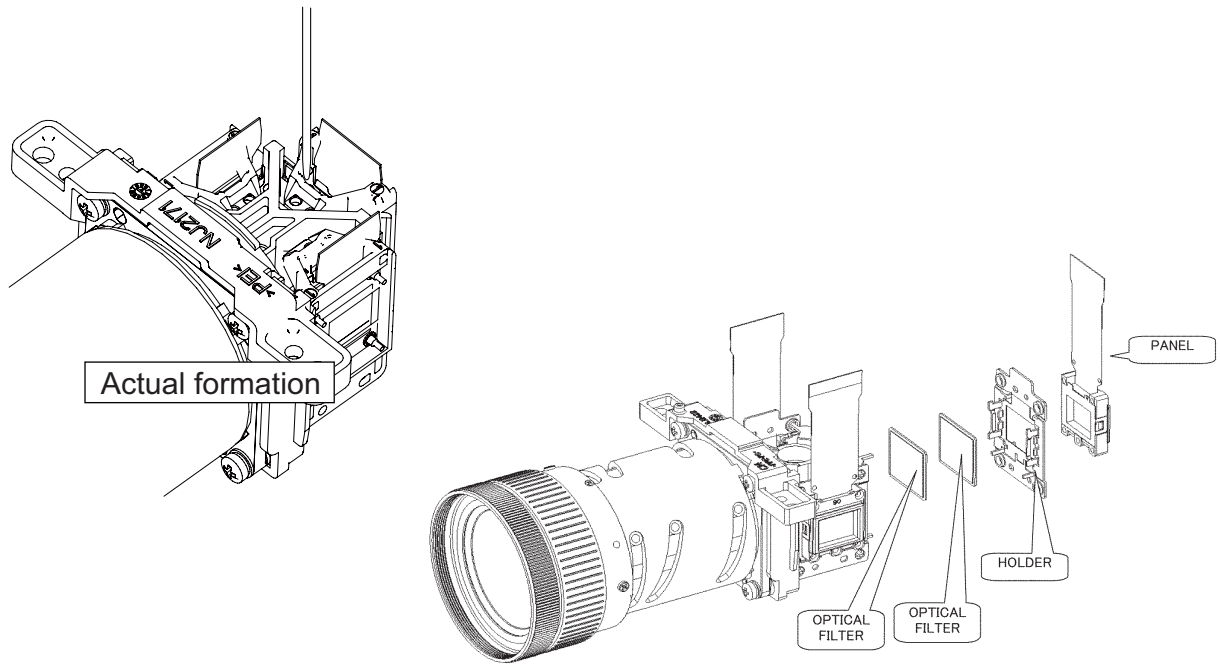
### **WARNING**

Never put the heavy stress to the main board.  
Otherwise, connectors will be damaged.

(5) Press and hold the switch S801 using an insulator during maintenance.

(6) Keep the unscrewed wires away from all of electric parts.

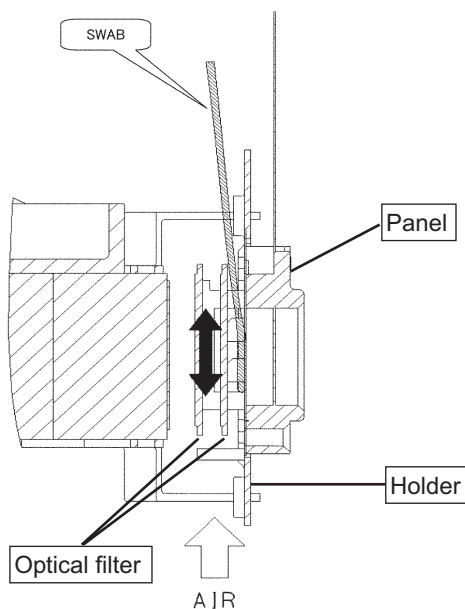
### 3. Maintenance



Each colour part has same construction. By using a swab and air duster, you can easily remove dust from panel and optical filter.

### 4. Cleaning the panels and optical filters

- (1) Turn on the set and light the lamp.
- (2) By using swab and air duster, remove the dust. Focusing dust makes you check the dust on screen.



- While removing the dust, separated dust will be blown off by air cooling system.
- Pay attention not to damage panels and optical filters.
- Bend the top of SWAB a little if it is hard to insert the SWAB.

### 5. Re-assembly

- (1) Turn off the set and unplug the power lead.
- (2) Remove an insulator from S801.
- (3) Screw down the MAIN board and connect the LCD panel flexible cables to the MAIN board.
- (4) Re-assemble the set.
- (5) While re-assembling, clean the intake filter by using a vacuum cleaner.

## 6-4 Battery

### 6-4-1 Replacing Internal Clock Battery

Consumption of the battery makes the clock not work correctly. When the clock is wrong or has stopped, replace the battery according to the following procedure.

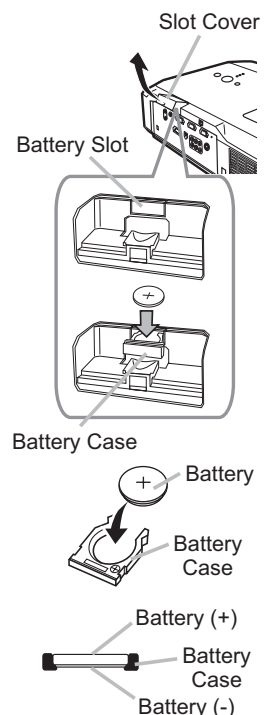
#### ⚠ WARNING

Always handle the batteries with care and use them only as directed. Battery may explode if mistreated. Do not recharge, disassemble or dispose of in fire.

Also, improper use may result in cracking or leakage, which could result in fire, injury and/or pollution of the surrounding environment.

- Be sure to use only the batteries specified. Do not use batteries of different types at the same time. Do not mix a new battery with used one.
- Make sure the plus and minus terminals are correctly aligned when loading a battery. If the battery is placed in the battery holder upside-down, it may be hard to remove.
- Keep a battery away from children and pets. If swallowed consult a physician immediately for emergency treatment.
- Do not short circuit or solder a battery.
- Do not allow a battery in fire or water. Keep batteries in a dark, cool and dry place.
- If you observe a leakage of a battery, wipe out the flower and then replace a battery. If the liquid adheres to your body or clothes, rinse well with water immediately.
- Obey the local laws on disposing the battery.

1. Turn off the projector and unplug the power lead.  
Allow the projector to cool sufficiently.
2. After making sure that the projector has cooled adequately, pull the slot cover forward, pushing slightly its edge up, and remove it from the projector.
3. Remove the battery case.  
Hold the battery case gutter by finger nail or other thing and pull out the battery case slowly from the battery slot.
4. Take the old battery out from the battery case.
5. Replace a new battery.  
Replace battery with **HITACHI MAXELL, Part No.CR2032** only. Use of another battery may present a risk of fire or explosion.  
Put a new battery into battery case. Make sure that the + is facing upward. Insert the battery case slowly into the battery slot until you hear the snap.
6. Close the slot cover.  
Replace the slot cover by reversing the procedure used when removing the cover.



#### NOTE

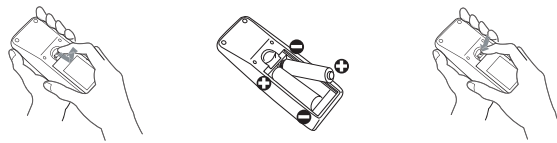
- The internal clock time will be reset when the battery is removed. Reconfigure the time via the menu or a web browser after replacing the battery.

## 6-4-2 Placing batteries into the remote control

### **WARNING**

Always handle the batteries with care and use them only as directed. Improper use may result in battery explosion, cracking or leakage, which could result in fire, injury and/or pollution of the surrounding environment.

- Be sure to use only the batteries specified. Do not use batteries of different types at the same time.  
Do not mix a new battery with used one.
- Make sure the plus and minus terminals are correctly aligned when loading a battery.
- Keep a battery away from children and pets.
- Do not recharge, short circuit, solder or disassemble a battery.
- Do not allow a battery in a fire or water. Keep batteries in a dark, cool and dry place.
- If you observe a leakage of a battery, wipe out the flower and then replace a battery.  
If the flower adheres your body or clothes, rinse well with water immediately.
- Obey the local laws on disposing the battery.



1. Remove the battery cover.  
Slide back and remove the battery cover in the direction of the arrow.
2. Insert the batteries.  
Align and insert the two AA batteries according to their plus and minus terminals as indicated in the remote control.
3. Close the battery cover.  
Replace the battery cover in the direction of the arrow and snap it back into place.

The signal settings for the remote control transmitter and the projector's remote sensor can be changed. If the remote control does not function properly try changing the signal setting.

Changing the signal setting for the remote control transmitter

(1) Setting 1 (FREQ. : NORMAL)

Simultaneously press and hold the MUTE and RESET buttons for about 3 seconds.

(2) Setting 2 (FREQ. : HIGH)

Simultaneously press and hold the MAGNIFY OFF and ESC buttons for about 3 seconds.

- Setting 1 is the factory default setting.
- When the batteries are removed from the remote control, user-specified settings are saved for about half a day. If the batteries are removed from the remote control for longer than half a day, the remote will reset to Setting 1.

Changing the signal setting for the projector's remote sensor

Switch between Setting 1 and 2 using the SERVICE/REMOTE FREQ item found in OPTION MENU.

Use the ▲/▼ button to change the Projector's remote sensor setting.

1:NORMAL ↔ 2:HIGH

Items with a checkmark are on. The factory default setting is for both 1:NORMAL and 2:HIGH to be on.

If the remote control does not function correctly set this to either only 1 or only 2. Neither can be turned off at the same time.

**NOTE:** The remote control will not function properly if the remote control transmitter settings and the projector's remote sensor settings are not the same.

## 6-5 Air filter

### WARNING

- Before servicing, make sure the power switch is off and the power cable is not plugged in, then allow the projector to cool sufficiently. Servicing in a high temperature state of the projector could cause an electric shock, a burn and/or malfunction to the projector.
- Use only the air filter of the specified type. Do not use the projector with the air filter and the filter cover removed. It could result in a fire and/or malfunction to the projector.
- The air filter should be cleaned periodically. If the air filter becomes clogged by dust or the like, internal temperatures rise and could cause a fire, a burn and/or malfunction to the projector.

### NOTE

- Replace the air filter when it is damaged or too soiled and also when you replace the lamp.
- Reset the filter time only when you have cleaned or replaced the air filter, for a suitable indication about the air filter.
- The projector may display the message such as “CHECK THE AIR FLOW” or turn itself off, to prevent the internal heat level rising.

If the air filter becomes clogged by dust or the like, internal temperatures rise and could cause a fire, a burn and/or malfunction to the projector. When the indicators or a message prompts to clean the air filter, clean the air filter as soon as possible.

Check and clean the air filter periodically, even if there is no message. Replace the air filter when it is damaged or too soiled.

Also when you replace the lamp, replace the air filter. An air filter of specified type will come together with a replacement lamp for this projector.

1. Turn off the projector and unplug the power lead. Allow the lamp to cool for at least 45 minutes.
2. When the projector is suspended from the ceiling, apply the vacuum cleaner to and around the filter cover first to prevent penetration of dust or the like.
3. Pull the filter cover knobs while lifting it. The filter unit which consists of the filter' cover, air filter and filter frame will come off.
4. Use a vacuum cleaner for the filter vent of the projector and the filter frame side of the filter unit.

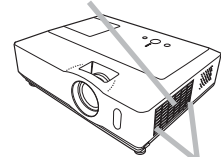
If the air filter is damaged or too soiled, replace it according to the following procedure number 5 to 7.

Otherwise, jump to procedure step number 8.

5. Pull the filter frame' knob up while holding the filter cover. The filter frame will come off and the air filter will appear.
6. Replace the air filter with new one.
7. Put back the filter frame.
8. Put back the filter unit into the projector.
9. Turn on the projector and reset the filter time using the FILTER TIME item in the EASY MENU.

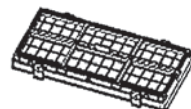
- (1) Press the MENU button to display a menu.
- (2) Point at the “FILTER TIME” using the ▼/▲ button, then press the ► button. A dialog will appear.
- (3) Press the ▲ button to select “RESET” on the dialog. It performs resetting the filter time.

Filter cover

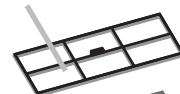


Filter cover knobs

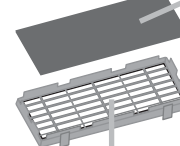
Filter unit



Filter frame



Air filter



Filter cover

## 6-6 Lamp

 **WARNING**

HIGH VOLTAGE



HIGH TEMPERATURE



HIGH PRESSURE

• The projector uses a high-pressure mercury glass lamp. The lamp can **break with a loud bang or burn out**, if jolted or scratched, handled while hot, or worn over time. Note that each lamp has a different life-time and some may burst or burn out soon after you start using them. In addition, when the bulb bursts, it is possible for **shards of glass** to fly into the lamp housing and for **gas containing mercury** to escape from the projector's vent holes.

• **Disposal of a lamp** • This product contains a mercury lamp; do not put it in the waste. Dispose of in accord with environmental laws.

For lamp recycling, go to [www.lamprecycle.org](http://www.lamprecycle.org). (in the US) For product disposal, contact your local government agency or [www.eiae.org](http://www.eiae.org) (in the US) or [www.epsc.ca](http://www.epsc.ca) (in Canada).



Disconnect the plug from the power outlet

- If the lamp should break (it will make a loud bang when it does), unplug the power lead from the outlet. Note that shards of glass could damage the projector's internals or cause injury during handling.
- If the lamp should break (it will make a loud bang when it does), ventilate the room well and make sure not to breathe the gas that comes out of the projector vents or get it in your eyes or mouth.
- Before replacing the lamp, turn off the projector and unplug the power lead, then wait at least 45 minutes for the lamp to cool sufficiently. Handling the lamp while hot can cause burns as well as damaging the lamp.



- Never unscrew except the indicated screws (marked by an arrow).
- Do not open the lamp cover while the projector is suspended from above. This is dangerous, since if the lamp's bulb has broken, shards will fall out when the cover is opened.
- Do not use the projector with the lamp cover removed. When replacing the lamp, make sure that the screws are screwed in firmly. Loose screws could result in damage or injury.

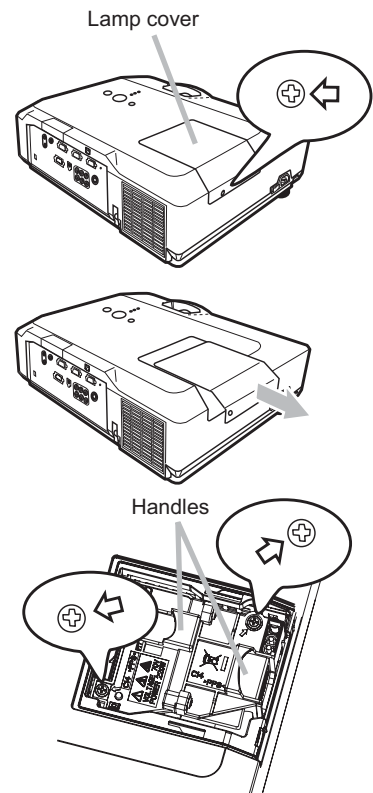


- Use only the lamp of the specified type.
- If the lamp breaks soon after the first time it is used, it is possible that there are electrical problems elsewhere besides the lamp. If this happens, contact your local dealer or a service representative.
- Handle with care: jolting or scratching could cause the lamp bulb to burst during use.
- Using the lamp for long periods of time could cause it dark, not to light up or to burst. When the pictures appear dark, or when the color tone is poor, please replace the lamp as soon as possible. Do not use old (used) lamps; this is a cause of breakage.
- Do not break up the lamp to replace because the structural parts broken up is unavailable.

## ● Replacing the Lamp

A lamp has a finite product life. Using the lamp for long periods of time could cause the pictures darker or the colour tone poor. Note that each lamp has a different lifetime and some may burst or burn out soon after being started using.

1. Turn off the projector and unplug the power lead.  
Allow the projector to cool for at least 45 minutes.
2. Prepare a new lamp.
3. Loosen the screw (marked by arrow) of the lamp cover and then slide the lamp cover to the side to remove it.
4. Loosen the 2 screws (marked by arrow) of the lamp and slowly pick up the lamp by the handles.
5. Insert the new lamp and retighten firmly the 2 screws of the lamp that are loosened in the previous process to lock it in place.
6. Slide the lamp cover back in place and firmly fasten the screw of the lamp cover.
7. Turn on the projector and reset the lamp time using the LAMP TIME item in the OPTION menu.
  - (1) Press the MENU button to display a menu.
  - (2) Point at the Go to Advanced Menu ... in the menu using the ▼/▲ button, then press the ► button.
  - (3) Point at the OPTION in the left column of the menu using the ▼/▲ button, then press the ► button.
  - (4) Point at the LAMP TIME using the ▼/▲ button, then press the ► button.  
A dialog will appear.
  - (5) Press the ▲ button to select RESET on the dialog. It performs resetting the lamp time.



**⚠ CAUTION ►** Do not touch any inner space of the projector while the lamp is taken out.

### NOTE

- Reset the lamp time only when you have replaced the lamp, for a suitable indication about the lamp.

## 6-7 Other care items

### **WARNING**

Before servicing, make sure the power switch is off and the power cable is not plugged in and then allow the projector to cool sufficiently. The care in a high temperature state of the projector could cause a burn and/or malfunction to the projector.

Avoid wetting the projector or inserting liquids in the projector. It could result in a fire, an electric shock and and/or malfunction to the projector.

- Do not put a container containing water, cleaner or chemicals near the projector.
- Do not use aerosols or sprays.

### **CAUTION**

Take correct care of the projector according to the following. Incorrect care could cause, not only an injury but, adverse influence such as discoloration, peeling paint, etc.

- Do not use cleaner or chemicals other than those listed below.
- Do not polish or wipe with hard objects.

#### ● **Inside of the projector**

In order to ensure the safe use of the projector, it needs to clean and inspect the projector about once a year.

#### ● **Caring for the lens**

If the lens is flawed, soiled or fogged, it could cause deterioration of display quality. Take care of the lens, noting the cautions when handling.

1. Turn off the projector and unplug the power lead. Allow the projector to cool sufficiently.
2. After making sure that the projector is cool adequately, lightly wipe the lens with a commercially available lens-cleaning wipe. Do not touch the lens directly with your hand.

#### ● **Caring for the cabinet and remote control**

Incorrect care could have adverse influence such as discolouration, peeling paint, etc.

1. Turn off the projector and unplug the power lead. Allow the projector to cool sufficiently.
2. After making sure that the projector is cool adequately, lightly wipe with gauze or a soft cloth.

If soiling is severe, dip soft cloth in water or a neutral cleaner dilute in water and wipe lightly after wringing well. Then wipe lightly with a soft, dry cloth.

## 6-8 AUTO adjustment

Use of AUTO adjustment with the image through RGB input optimises V\_POSI, H\_POSI, H\_SIZE and H\_PHASE automatically.

In the case that projected image has dark tone around its periphery, AUTO operation sometimes makes artifacts in the image, shifts capture area and so on. These failures are caused when the period of image data is not exactly distinguished with the period of blanking on signal processing.

To avoid such phenomena, AUTO function should be used with the full size picture that has bright tone on its periphery.



Image when AUTO operates correctly



Image when AUTO fails.

- Noting image of top or bottom lines.
- Shift of the image to East or West.
- Artifacts on image. Etc.

### Note

- 1) The phenomenon of the failure of AUTO adjustment depends on resolution of input source, scene of picture etc.
- 2) There is no failure above in AUTO with video source through VIDEO, S-VIDEO or COMPONENT input.  
The reason is because recognition of input the signal's standard does not need to search the capture range from the input signal itself.

## 6-9 How to deactivate the security functions

This projector is equipped with security functions.

### (1) MyScreen PASSWORD

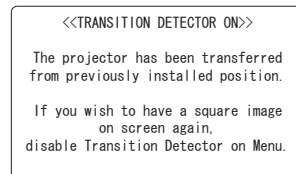
The MyScreen PASSWORD function can be used to prohibit access to the MyScreen function and prevent the currently registered MyScreen image from being overwritten.

### (2) PIN LOCK

PIN LOCK is a function which prevents the projector from being used unless a registered Code is input.

### (3) Transition detector

Transition detector is a function which prevents the projector from being used if vertical angle of the projector and mirror setting is not same with recorded.



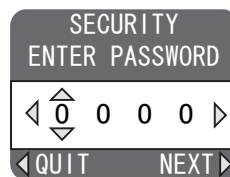
Transition Detector Alarm

It is possible to deactivate all security functions temporarily with following procedures.

### (1) Go to "SECURITY" on OPTION Menu and press the ► button.

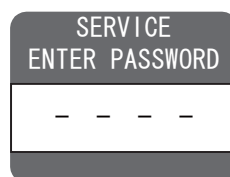
Then, ENTER PASSWORD box will be displayed.

(The BOX will be displayed by pressing the [MENU] button (remote) or [▲/▼/◀/▶] button (keypad) when Transition Detector Alarm is displayed.)



ENTER PASSWORD box

### (2) Press the [Magnify off] button once, then press [Magnify off] button of remote for 3 second or more to display SERVICE PASSWORD box.



SERVICE PASSWORD box

### (3) Enter the Life Key (MENU, ▼, KEYSTONE, ▲). Then all security functions will be deactivated temporarily.

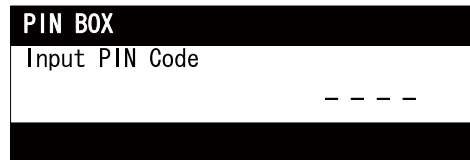
**Note:** • The Life key can be used up to 30 times. The key cannot be used thereafter. If the Life key cannot be used, see the paragraph of SECURITY in the User's Manual.

The frequency in which Life key is input will be set to 0 after the registered code is input.

- The SECURITY Menu cannot be operated if the SECURITY PASSWORD was released by Life key.
- The Mirror, Keystone and Auto keystone are not memorised though they are possible to operate if Transition Detector was released by Life key.
- The MyScreen Lock on SCREEN Menu keeps "TURN ON" if MyScreen PASSWORD was set when SECURITY PASSWORD was released by Life key.

## 6-10 PIN LOCK System

If the following PIN BOX menu appears after power on of the projector, the PIN LOCK system has been activated. Under such a condition, key operations and signal displaying are inhibited. To open the PIN LOCK system, we need to input the correct 4-digit PIN CODE. If correct PIN CODE is not input in 5 min., the lamp will be automatically turned off.



PIN BOX

### Returning repaired unit

Use the Master PIN code. See the paragraph of Releasing the PIN LOCK system deactivation.

### Swap unit/Returned unit

Release all security systems. See the paragraph of the PIN LOCK system deactivation.

### Releasing the PIN LOCK System

When the PIN BOX menu is displayed, sequentially enter the codes with remote controller as follows. In accordance with remote controller button entry, “\*” mark appears in the PIN BOX menu.

#### Master PIN codes

1st entry code: Press the “MENU” button.

2nd entry code: Press the “▼” button.

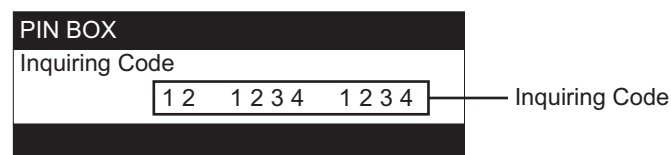
3rd entry code: Press the “KEYSTONE” button.

4th entry code: Press the “▲” button.

**Note:** The Master PIN codes can be used up to 30 times. The codes cannot be used thereafter. If the Master PIN codes cannot be used, see the paragraph of the PIN LOCK system deactivation.

### The PIN LOCK System deactivation

1. When the PIN BOX menu is displayed, press “RESET” for 3 seconds or more in order to get the ID Inquiring Code.



PIN BOX (ID Inquiring Code)

2. Send HITACHI sales company the Inquiring code (10 digits) to inquire the correct PIN code.
3. With the PIN BOX menu displayed, input the correct PIN code. Enter the correct PIN CODE that HITACHI sales company supplied.
4. Open menu and select “TURN OFF” from the PIN LOCK items in the SECURITY menu. Then the PIN BOX menu appears.  
Password is required to display the Security Menu.  
See the Security in OPTION menu: User’s Manual - Operating Guide.
5. Input the correct PIN code in the PIN BOX menu.
6. Then, PIN LOCK will be set to “TURN OFF”.
7. Deactivate the MyScreen PASSWORD and Transition Detector too.  
Reset the Security Password to [8471].  
See the Security in OPTION menu: User’s Manual - Operating Guide.

## 6-11 Related Messages

When the unit's power is on, messages such as those shown below may be displayed. When any such message is displayed on the screen, please respond as described below.

Although these messages will automatically disappear after around several minutes, they will reappear every time the power is turned on.

| Message                                                                                                                                                                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NO INPUT IS DETECTED<br>***                                                                                                                                                       | <b>There is no input signal.</b><br>Confirm the signal input connection and the status of the signal source.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| SYNC IS OUT OF RANGE<br>***<br>[F] *****kHz [V] *****Hz                                                                                                                           | <b>The horizontal or vertical frequency of the inputted signal is outside of the response parameters of this unit.</b><br>Confirm the specs for this unit or the signal source specs.                                                                                                                                                                                                                                                                                                                                                   |
| CHECK THE AIR FLOW                                                                                                                                                                | <b>The internal portion temperature is rising.</b><br>Please turn OFF the power and allow the unit to cool down for least 20 minutes.<br>After having confirmed the following items, please turn ON the power again. <ul style="list-style-type: none"> <li>• Is there blockage of the air passage aperture?</li> <li>• Is the air filter dirty?</li> <li>• Does the peripheral temperature exceed 35°C?</li> </ul> If the same indication is displayed after remedy, set the FAN SPEED of the SERVICE item in the OPTION menu to HIGH. |
| REMINDER<br>***HRS PASSED AFTER THE<br>LAST FILTER CHECK.<br>FILTER MAINTENANCE IS ESSENTIAL<br>TO REMOVE WARNING MESSAGE,<br>RESET FILTER TIMER.<br><br>SEE MANUAL FURTHER INFO. | <b>A note of precaution when cleaning the air filter.</b><br>Immediately turn OFF the power and clean or change the air filter by referring to the "Air Filter" section of this manual. After you have cleaned or changed the air filter be sure to reset the filter timer.                                                                                                                                                                                                                                                             |

## 6-12 Indicator lamps

Lighting and flashing of the POWER indicator, LAMP indicator and TEMP indicator have the meanings as described in the table below. Please respond in accordance with the instructions within the table.

| POWER indicator                         | LAMP indicator               | TEMP indicator  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------|------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lighting In Orange                      | Turned off                   | Turned off      | <b>The projector is in a standby state.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Blinking In Green                       | Turned off                   | Turned off      | <b>The projector is warming up.</b><br>Please wait.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Lighting In Green                       | Turned off                   | Turned off      | <b>The projector is in an on state.</b><br>Ordinary operations may be performed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Blinking In Orange                      | Turned off                   | Turned off      | <b>The projector is cooling down.</b><br>Please wait.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Blinking In Red                         | (discretionary)              | (discretionary) | <b>The projector is cooling down. A certain error has been detected.</b><br>Please wait until the POWER indicator finishes blinking then perform the correct measure using the item descriptions below.                                                                                                                                                                                                                                                                                                                                                                                                            |
| Blinking In Red or Lighting In Red      | Lighting In Red              | Turned off      | <b>The lamp does not light and there is a possibility that interior portion has become heated.</b><br>Please turn off the power and allow the projector to cool down at least 20 minutes. After the projector has sufficiently cooled down, confirm the following items and then turn on the power again.<br><ul style="list-style-type: none"> <li>• Is there blockage of the air passage aperture?</li> <li>• Is the air filter dirty?</li> <li>• Does the peripheral temperature exceed 35°C?</li> </ul> If the same indication is displayed after the remedy, change the lamp referring to the section "Lamp". |
| Blinking In Red or Lighting In Red      | Blinking In Red              | Turned off      | <b>The lamp cover has not been properly fixed (attached).</b><br>Please turn off the power and allow the unit to cool down at least 45 minutes. After the projector has sufficiently cooled down, confirm the attachment state of the lamp cover. After performing any needed maintenance, turn on the power again.                                                                                                                                                                                                                                                                                                |
| Blinking In Red or Lighting In Red      | Turned off                   | Blinking In Red | <b>The cooling fan is not operating.</b><br>Please turn off the power and allow the unit to cool down at least 20 minutes. After the projector has sufficiently cooled down, confirm that no foreign matter has become caught in the fan, etc., and then turn on the power again. If the same indication is displayed after the remedy, please replace a fan.                                                                                                                                                                                                                                                      |
| Blinking In Red or Lighting In Red      | Turned off                   | Lighting In Red | <b>There is a possibility that the interior portion has become heated.</b><br>Please turn off the power and allow the unit to cool down at least 20 minutes. After the projector has sufficiently cooled down, confirm the following items and then turn on the power again.<br><ul style="list-style-type: none"> <li>• Is there blockage of the air passage aperture?</li> <li>• Is the air filter dirty?</li> <li>• Does the peripheral temperature exceed 35°C?</li> </ul> If the same indication is displayed after the remedy, set the FAN SPEED of the SERVICE item in the OPTION menu to HIGH.             |
| Lighting In Green                       | Alternative blinking in Red  |                 | <b>There is a possibility that the interior portion has become overcooled.</b><br>Use the unit within the usage temperature parameters (5°C to 35°C). After treatment, reset the power to ON. If the same indication is displayed after the treatment, make sure that the proper cables are connected to each of the connectors E301, E302 and E304 on the MAIN board.                                                                                                                                                                                                                                             |
| Lighting In Green                       | Simultaneous blinking in Red |                 | <b>It is time to clean the air filter.</b><br>Immediately turn OFF the power and clean or change the air filter referring to the section "Air Filter". After cleaning or changing the air filter, reset the filter timer. After the remedy, reset the power to ON.                                                                                                                                                                                                                                                                                                                                                 |
| Blinking in Green for approx. 3 seconds | Turned off                   | Turned off      | <b>At least 1 "Power ON" schedule is saved to the projector.</b><br>(Please refer to the User's Manual Network Functions: Schedule Setting for more information)                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

**NOTE** • When the interior portion has become overheated, for safety purposes, the power source is automatically turned off and the indicator lamps may also be turned off. In such a case, press the "○" (OFF) side of the power switch and wait at least 45 minutes. After the projector has sufficiently cooled down, confirm the attachment state of the lamp and lamp cover, then turn on the power again.

## 6-13 HIDDEN SERVICE MENU

To display the OSD for "HIDDEN SERVICE MENU" set up.

| HIDDEN SERVICE |          |
|----------------|----------|
| AIR-SENSOR     | EXECUTE  |
| LAMP ALARM     | NONE     |
| PJLink         | TURN OFF |
| STARTUP TYPE   | 1        |
| PANEL TIME     | 1234h    |
| NETWORK RESET  |          |
| SOFT RESET     |          |

| By the control panel                                                                                                                                                                                                                                                                                                                                      | By the remote control transmitter                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Display the Advanced menu by the "MENU" button. (If EASY MENU appears, choose "Go to Advanced menu" to display ADVANCED MENU.)</li> <li>2. Select the "OPTION" on the menu.</li> <li>3. Continue press the button [◀] first, then press the button [◀] together with "INPUT" and hold for 3 seconds.</li> </ol> | <ol style="list-style-type: none"> <li>1. Display the menu by the "MENU" button. (If EASY MENU appears, choose "Go to Advanced menu" to display ADVANCED MENU.)</li> <li>2. Select the "OPTION" on the menu.</li> <li>3. Press the "MAGNIFY OFF" button.<br/>Next hold the "MAGNIFY OFF" button for 3 seconds.</li> </ol> |

### ● AIR - SENSOR

Execute this item to adjust the air sensor.

### ● PJLink

Select the PJLink. Turn off ↔ Turn on

### ● LAMP ALARM

Select the lamp alarm level. 3 Level ↔ 1 Level ↔ None

"3 Level" shows three kinds of lamp-messages according to the LAMP TIME count.

"1 Level" shows one kind of lamp-message according to the LAMP TIME count.

"None" shows no lamp-messages. It is the factory default setting.

### ● STARTUP TYPE

Select the startup screen type. 1 : shows Hitachi Logo

2 : No Hitachi Logo

### ● PANEL TIME

Use time of LCD panel. Reset the PANEL TIME whenever you changed the LCD/LENS prism assembly.

### ● NETWORK RESET

If this is executed, all of the network setting are initialised.

### ● SOFT RESET

If this is executed, all of the user data is initialised. Never use it when not required.

## 6-14 RUN TIME window

### ● Set operating time display method (accumulated lamp time display method)

1. Select "OPTION" from the Advanced menu, then place the cursor on the "LAMP TIME".
2. Press the [▶], [ENTER] or [RESET] button.
3. Press the [Reset] button once, then press [KEYSTONE] button of the remote control for 3 seconds or more to display the screen shown below. (The menu will close after 10 seconds if there are no further operations.)
4. Use [▲] or [▼] to select the usage status number. (The usage status is as shown below.)

| RUN TIME |       |                                   |
|----------|-------|-----------------------------------|
| LAMP     | 1234h | ← Lamp time                       |
| NORMAL   | 1000h | ← Lamp time(Normal)               |
| WHISPER  | 234h  | ← Lamp time(Whisper)              |
| AC       | 2000h | ← AC energising time              |
| On       | 1     | ← Number of times on              |
| Off      | 0     | ← Number of times off             |
| No.0     |       | ← Usage status number (See below) |

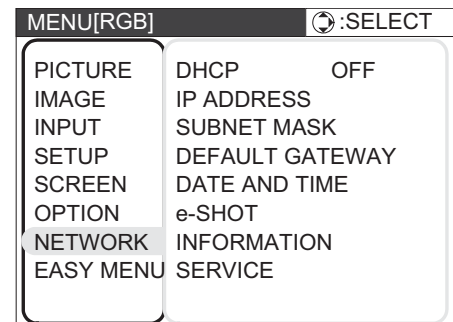
Usage status number

- 0 ..... Total usage status
- 1 ..... Current usage status
- 2 ..... Usage status before first reset
- 3 ..... Usage status before second reset
- ||
- 9 ..... Usage status before eighth reset

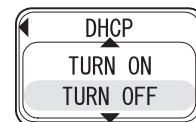
## 6-15 Resetting the Network Web password / User ID, Network Control password

ATTENTION: Performing this operation initialises the network settings. If the projector has the customised settings in the network, make a note of the network settings to restore them before this operation.

1. Display the NETWORK menu.



2. Select "OFF" in the item of DHCP.



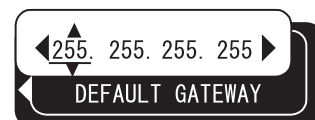
3. Enter "255.255.255.255" in the item of IP ADDRESS.



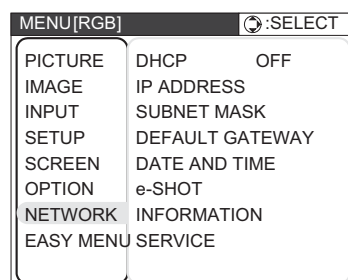
4. Enter "255.255.255.255" in the item of SUBNET MASK.



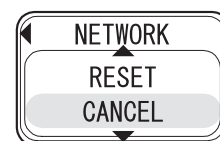
5. Enter "255.255.255.255" in the item of DEFAULT GATEWAY.



6. While NETWORK menu is displayed, press the RESET button of the remote control.



Press RESET button



7. Press ▲ button to execute reset.

The operation described above resets not only Web password but also NETWORK settings.

NOTE:

When you execute this reset operation with any other settings than above (described in the step 2 to 5), the WEB password, SNTP server address, DATE AND TIME and other schedule settings are not initialised but the network settings (DHCP, IP ADDRESS, SUBNET MASK and DEFAULT GATEWAY) are.

8. If the network settings had been customised, restore them by manual operation.

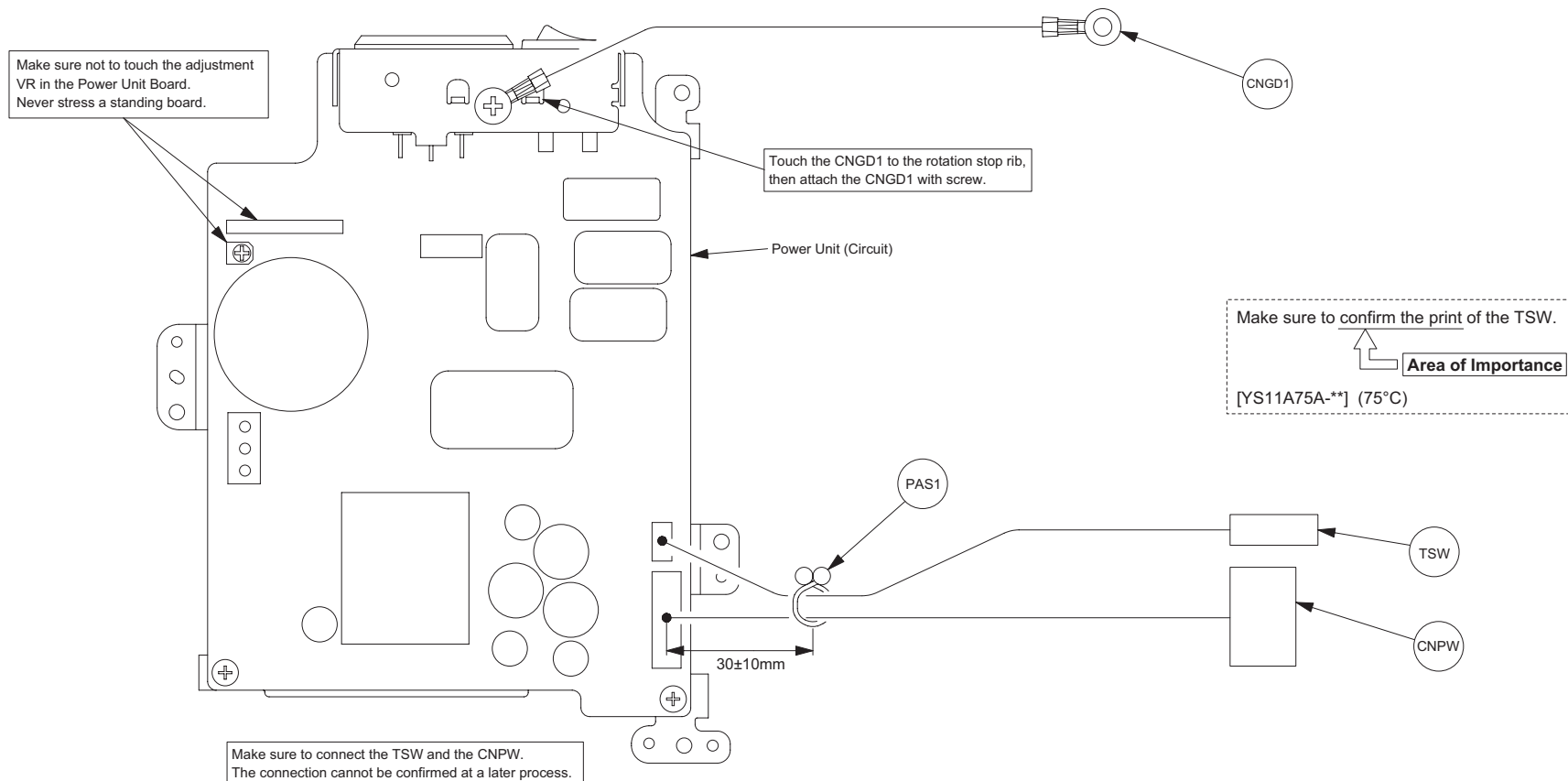
## 7. Wiring diagrams

### Wiring the Power Unit (Circuit)

- (1) Attach the CNGD1 with screw.
- (2) Connect the TSW after confirming the print of the TSW.
- (3) Connect the CNPW.
- (4) Bundle the CNPW and the TSW with purse lock (PAS1).

#### Area of Importance

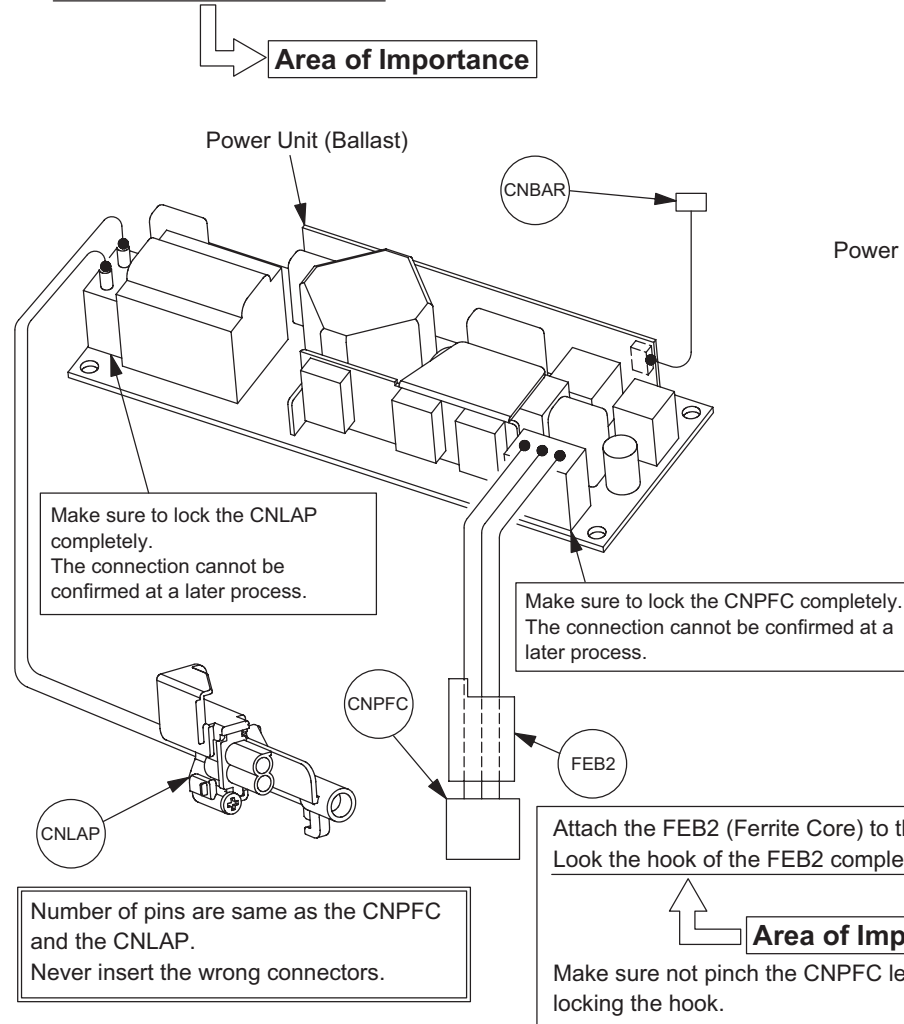
The operations with this symbol have implications with laws/standards. It is possible to be in violation of these laws/standards when these operations are not carried out according to the instructions. Assemble according to the operation instructions.



Wiring diagram 1

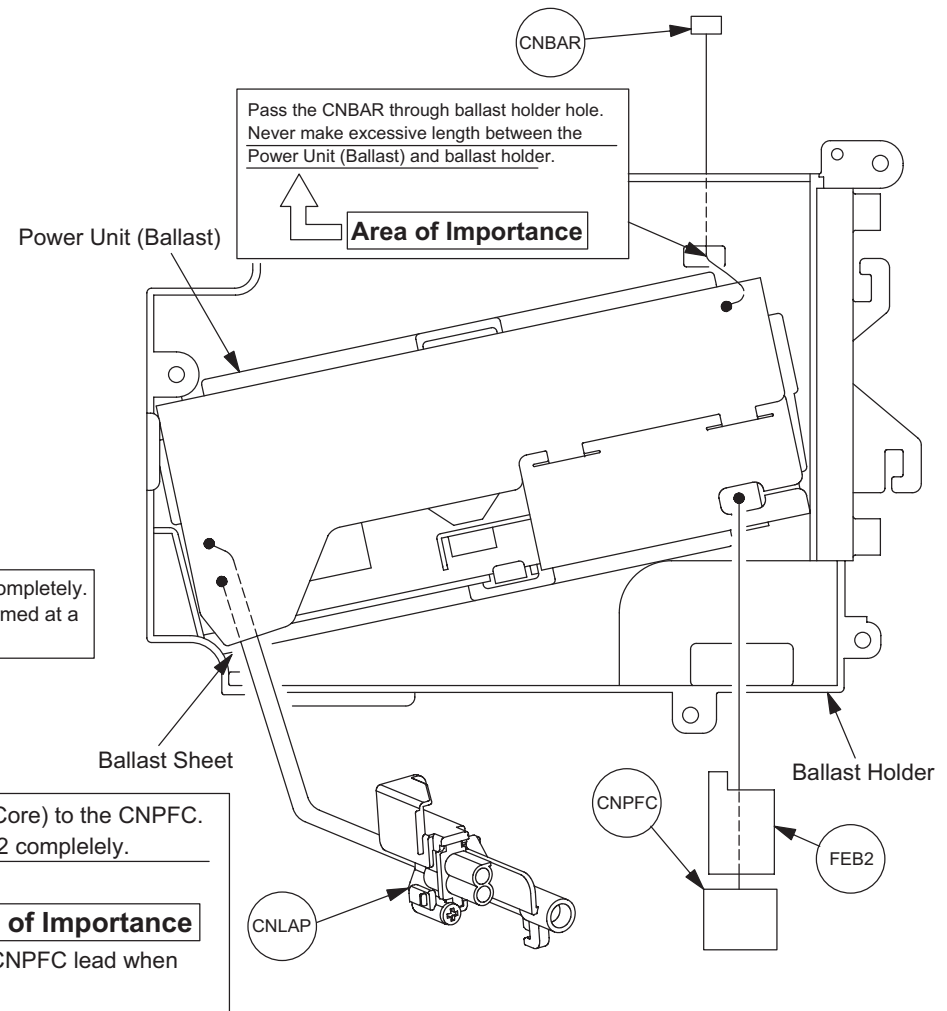
## Preparation of the Power Unit (Ballast)

- (1) Connect the CNBAR, the CNPFC and the CNLAP.
- (2) Pass the CNPFC lead through the FEB2.  
Lock the hook completely.



## Wiring after attaching the Power Unit (Ballast)

- (1) Style the CNBAR, the CNPFC and the CNLAP.



Wiring diagram 2

## Assembling the Power Unit Block

### The assembly order of the Power Block

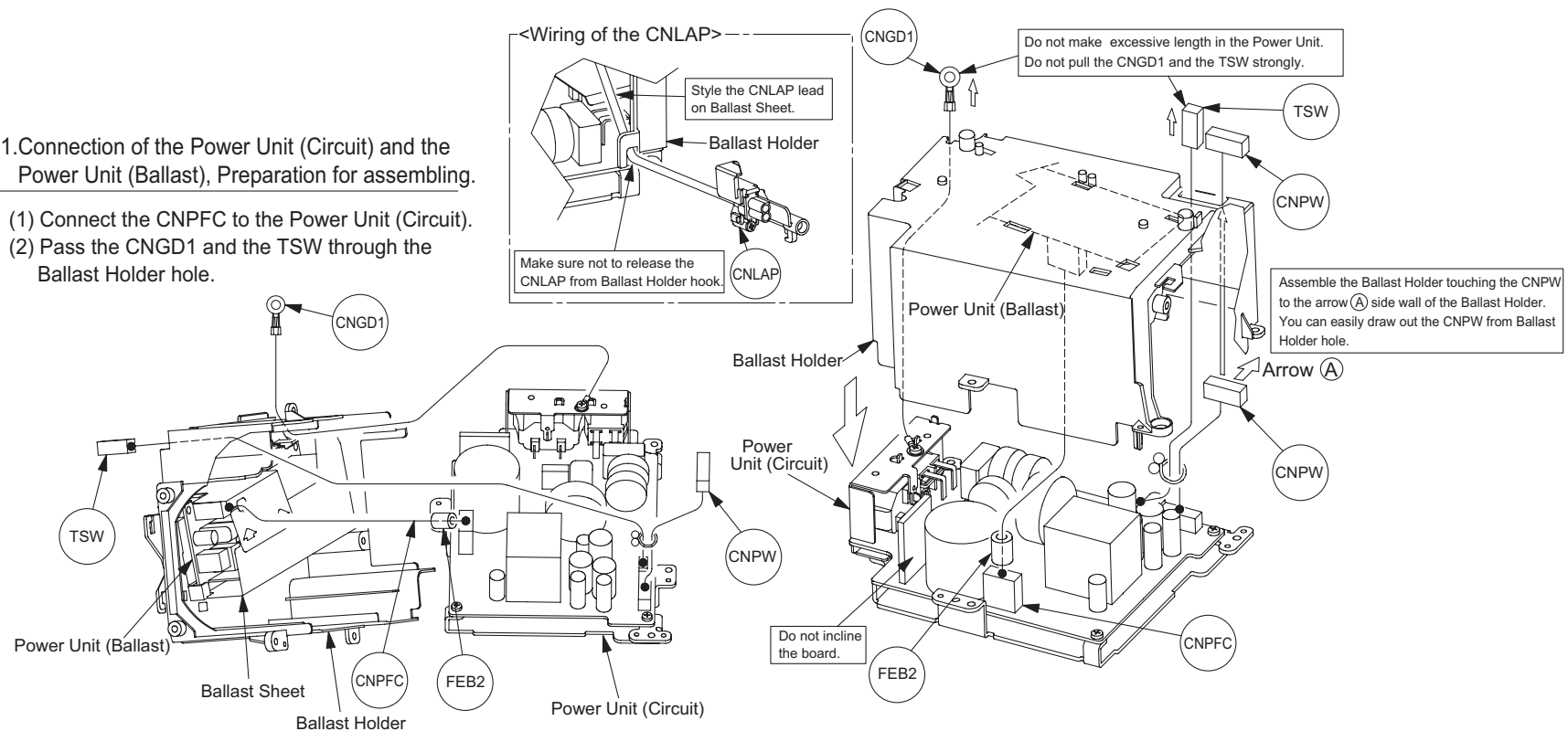
Assemble the Power Unit (Circuit) and Power Unit (Ballast) - Ballast Holder - using the following procedures.  
Refer the wiring of the Power Unit Block (next page) to style the cables after assembling the Power Unit Block.

### 2. Assembling of the Power Unit (Circuit) and Power Unit (Ballast).

- (1) Attach the Ballast Holder to the Power Unit (Circuit) drawing out the CNPW.  
Assemble the Ballast Holder and the Power Unit (Circuit) touching the CNPW to the arrow (A) side wall of the Ballast Holder.  
You can easily draw out the CNPW.
- (2) Draw out the CNPW from the Ballast Holder hole, then style the CNGD1 and the TSW.  
Do not make excessive length in the Power Unit.  
Do not pull the CNGD1 and the TSW strongly, otherwise connector might be released.
- (3) Style the igniter lead (CNLAP) on the Ballast Sheet.  
Make sure not to release the CNLAP from Ballast Holder hook, then attach the Ballast Holder with screws.

### 1. Connection of the Power Unit (Circuit) and the Power Unit (Ballast), Preparation for assembling.

- (1) Connect the CNPFC to the Power Unit (Circuit).
- (2) Pass the CNGD1 and the TSW through the Ballast Holder hole.

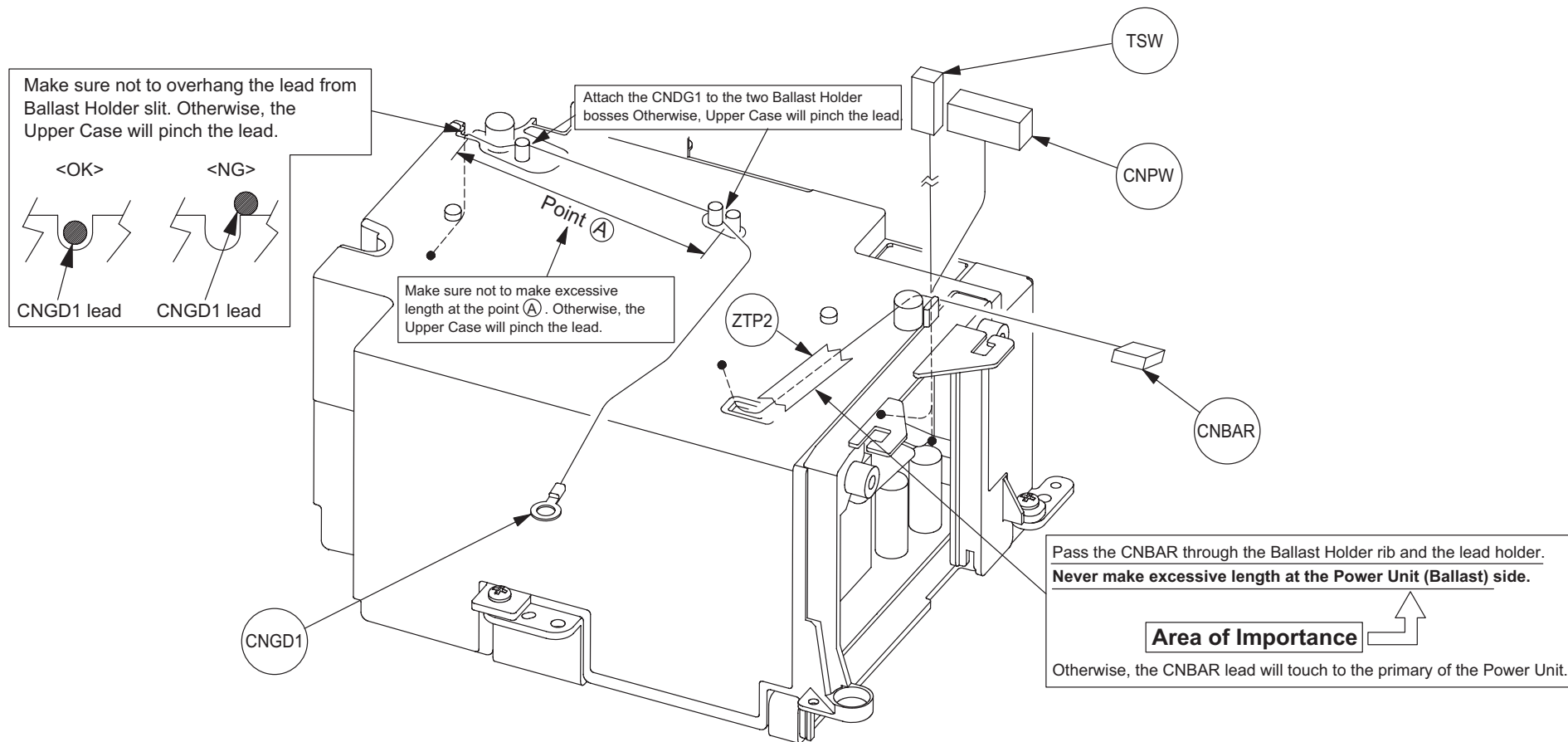


Wiring diagram 3

## Wiring the Power Unit

### Styling the Power Unit Assembly

- (1) Attach the CNDG1 to the two Ballast Holder bosses.
  - Make sure not to overhang the lead from Ballast Holder slit. (Otherwise, the Upper Case will pinch the lead.)
  - Do not make excessive length at the power unit side.
- (2) Pass the CNBAR through the Ballast Holder rib and the lead holder.

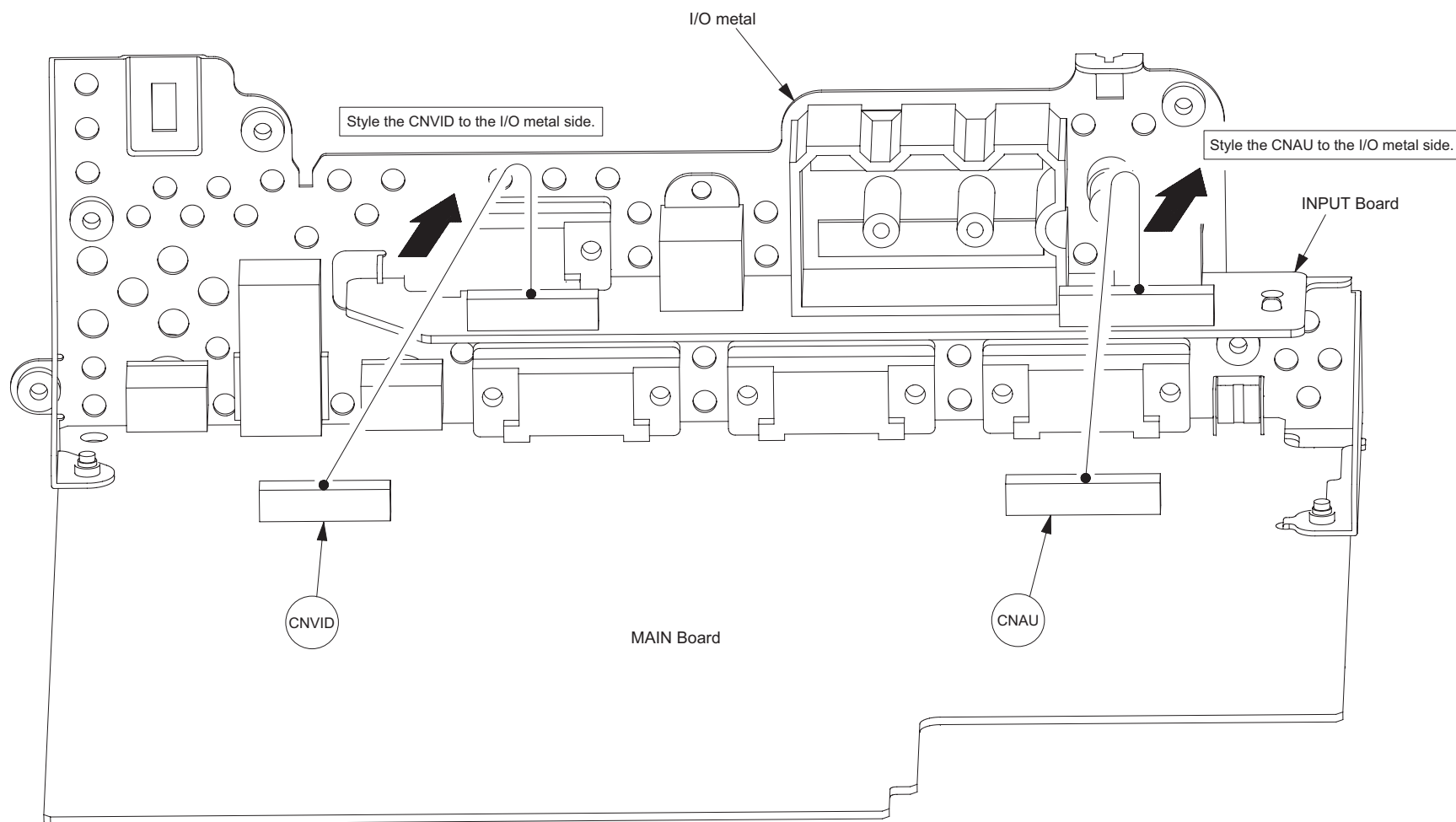


Wiring diagram 4

## Preparation for assembling MAIN Board

Wiring when assembling the INPUT Board.

- (1) Connect the MAIN Board and the INPUT Board with the CNVID and the CNAU.  
Insert connector to the INPUT Board first, attach the I/O metal next.
- (2) Style the CNVID and the CNAU to the I/O metal side.

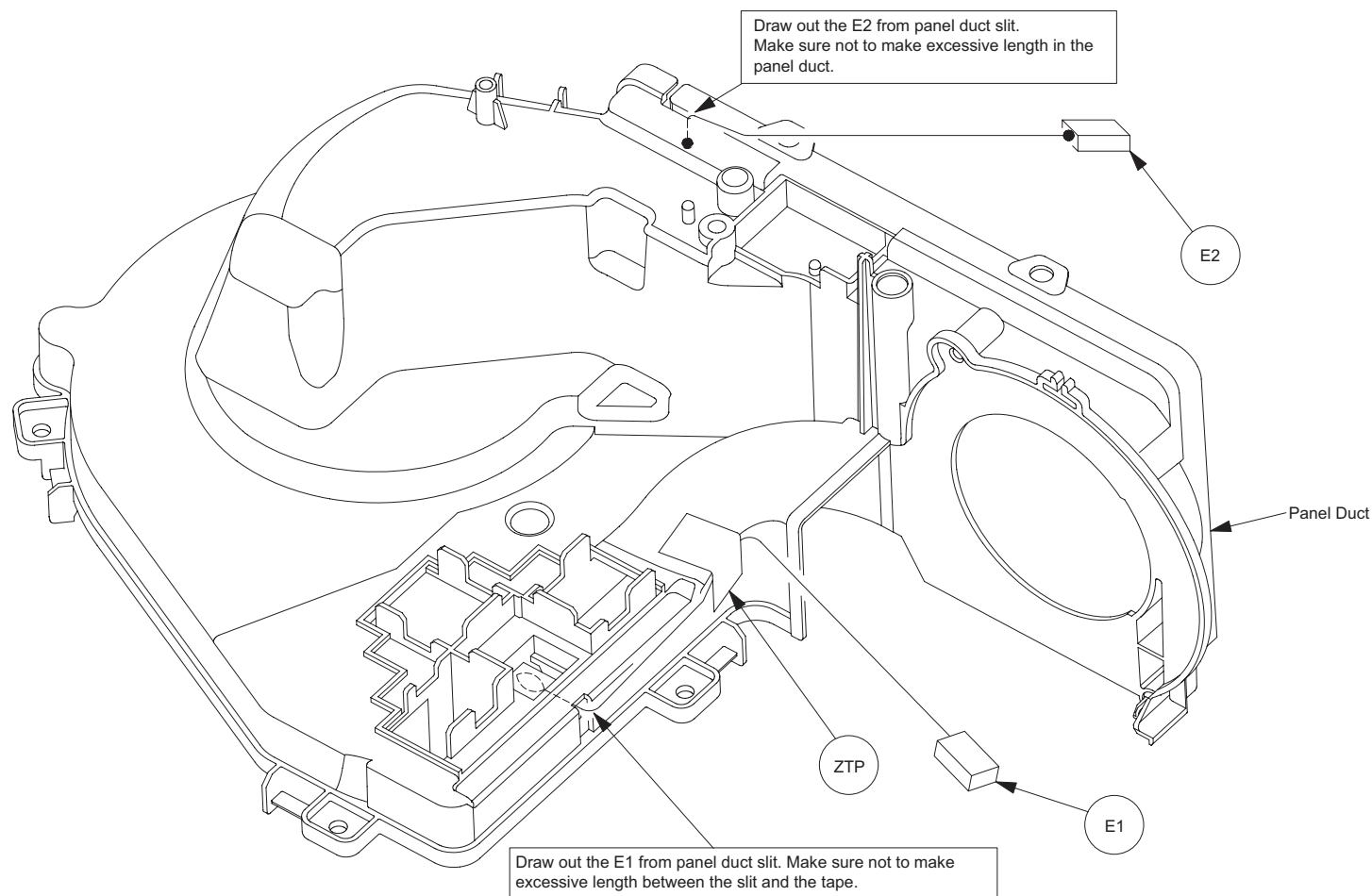


Wiring diagram 5

### Preparation of the Panel Duct

#### Wiring when assembling the Panel Duct.

- (1) Draw out the E1 from the panel duct incision.  
Style the E1 along the side of panel duct, then fix the E1 with tape.
- (2) Attach the E2 to the panel duct with screw, then draw out the E2 from panel duct slit.  
Make sure not to make excessive length in the panel duct.

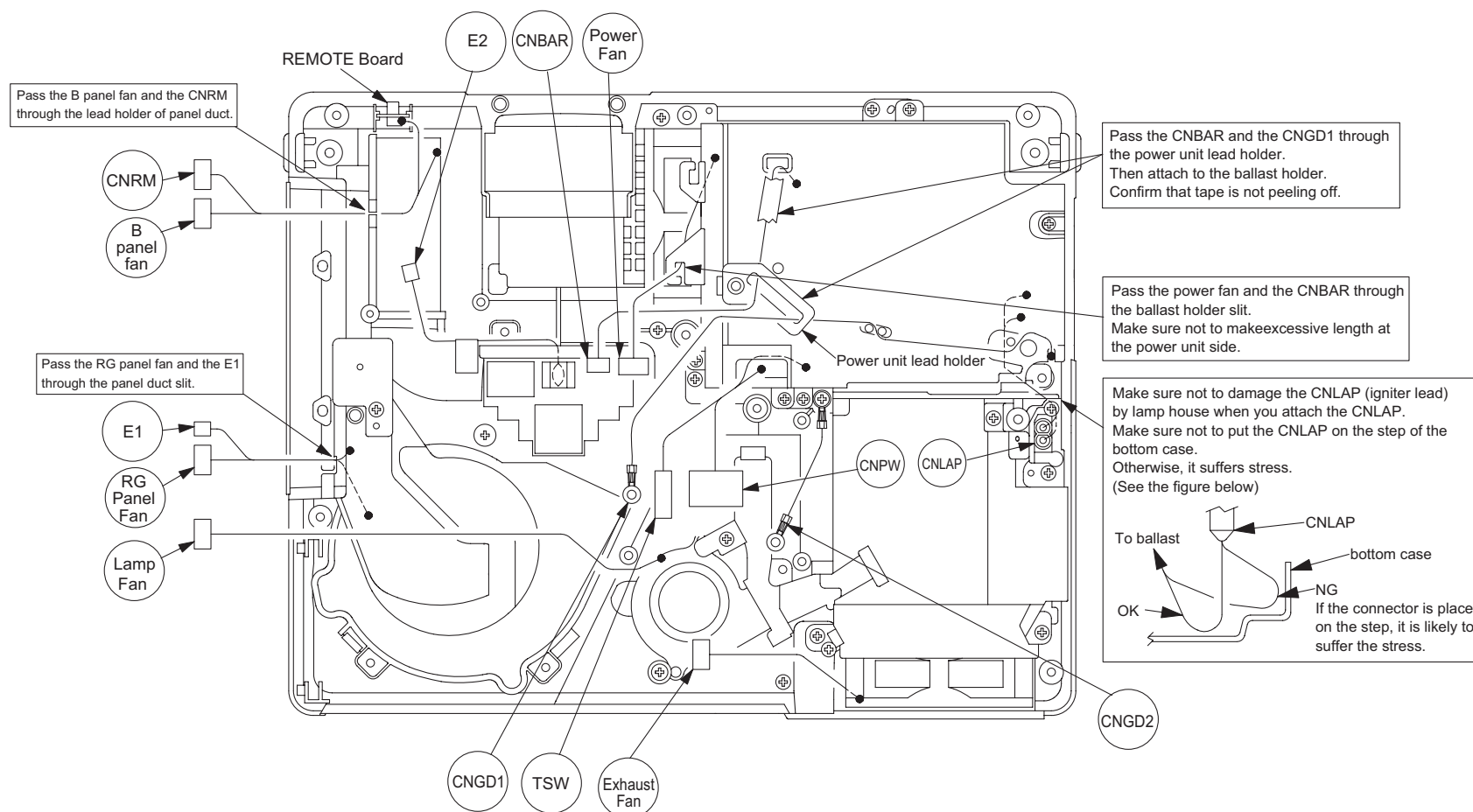


Wiring diagram 6

## Attaching the Power Unit

### Wiring when attaching the Power Unit

- (1) Attach the CNGD2. (Attach the lamp house with this screw too.)
- (2) Pass the power fan and the CNBAR through the ballast holder slit.  
Make sure not to make excessive length at the power unit side.
- (3) Attach the CNLAP to the lamp holder (bottom case). Make sure not to damage the lead.
- (4) Pass the RG panel fan and the E1 through the panel duct slit. Attach them to the panel duct.
- (5) Connect the CNRM to the remote board. Then attach the remote board to the bottom case.
- (6) Pass the B panel fan and the CNRM through the lead holder of panel duct.
- (7) Pass the CNBAR and the CNGD1 through the power unit lead holder.  
Then attach the power unit lead holder to the ballast holder.

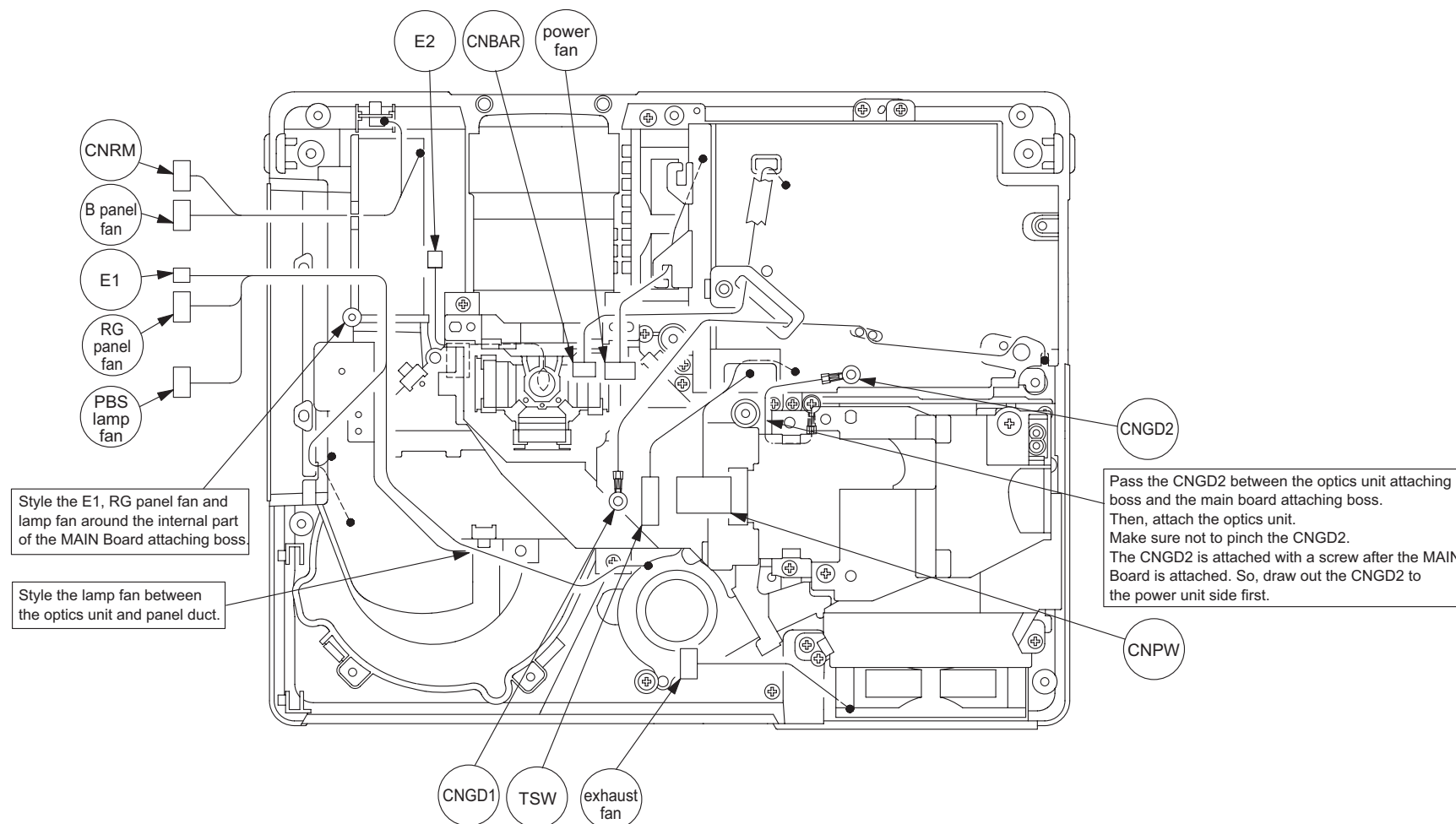


Wiring diagram 7

## Attaching the Optics Unit

Wiring when attaching the optics unit.

- (1) Pass the CNGD2 between the Optics Unit boss and the MAIN Board boss.  
Then, attach the optics unit.
- (2) Style the E1, RG panel fan and lamp fan around the internal part of the MAIN Board attaching boss.

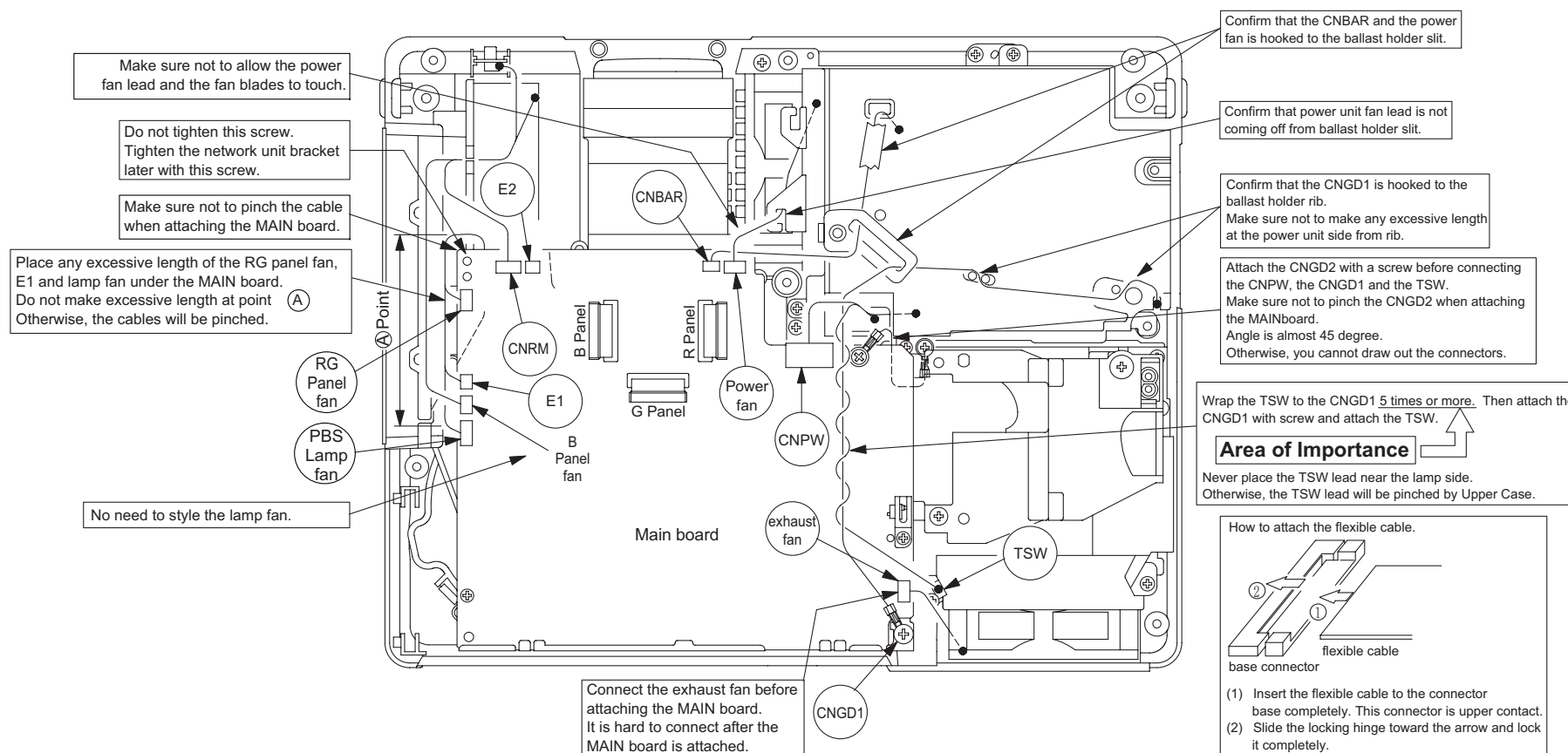


Wiring diagram 8

## Attaching the MAIN Board

### Wiring when attaching the MAIN Board

- (1) Attach the MAIN Board after connecting the Exhaust Fan.  
Then, attach the CNGD2 to the MAINboard with a screw.
- (2) Connect the CNPW. Place the TSW and CNGD1 under the CNPW.
- (3) Connect the E2, CNRM, B panel fan, RG panel fan, E1, lamp fan and speaker.
- (4) Place any excessive length of the RG panel fan, E1 and lamp fan under the MAIN board otherwise, the cables will be pinched.
- (5) Connect the CNBAR and power unit fan.
- (6) Connect the flexible cable (LCD panel).
- (7) Wrap the TSW to the CNGD1 5 times. Then, attach the CNGD1 and the TSW.

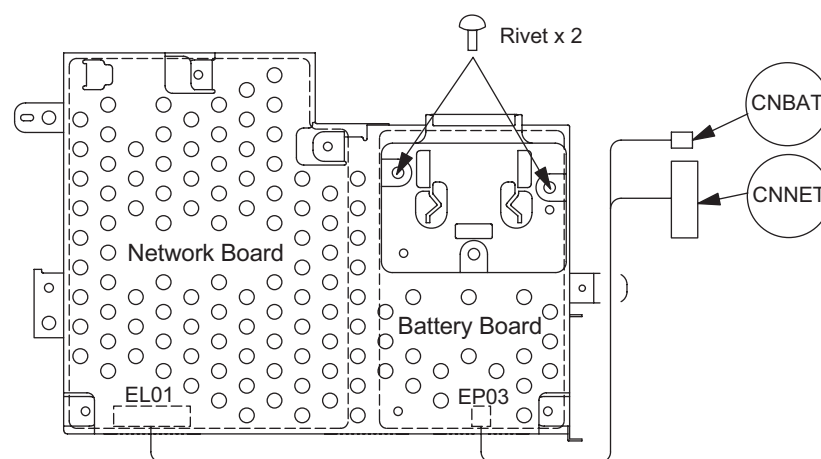


Wiring diagram 9

## Preparation of the Network Unit

(1) Connect the CNNET and CNBAT.

### Wiring of the Network Unit

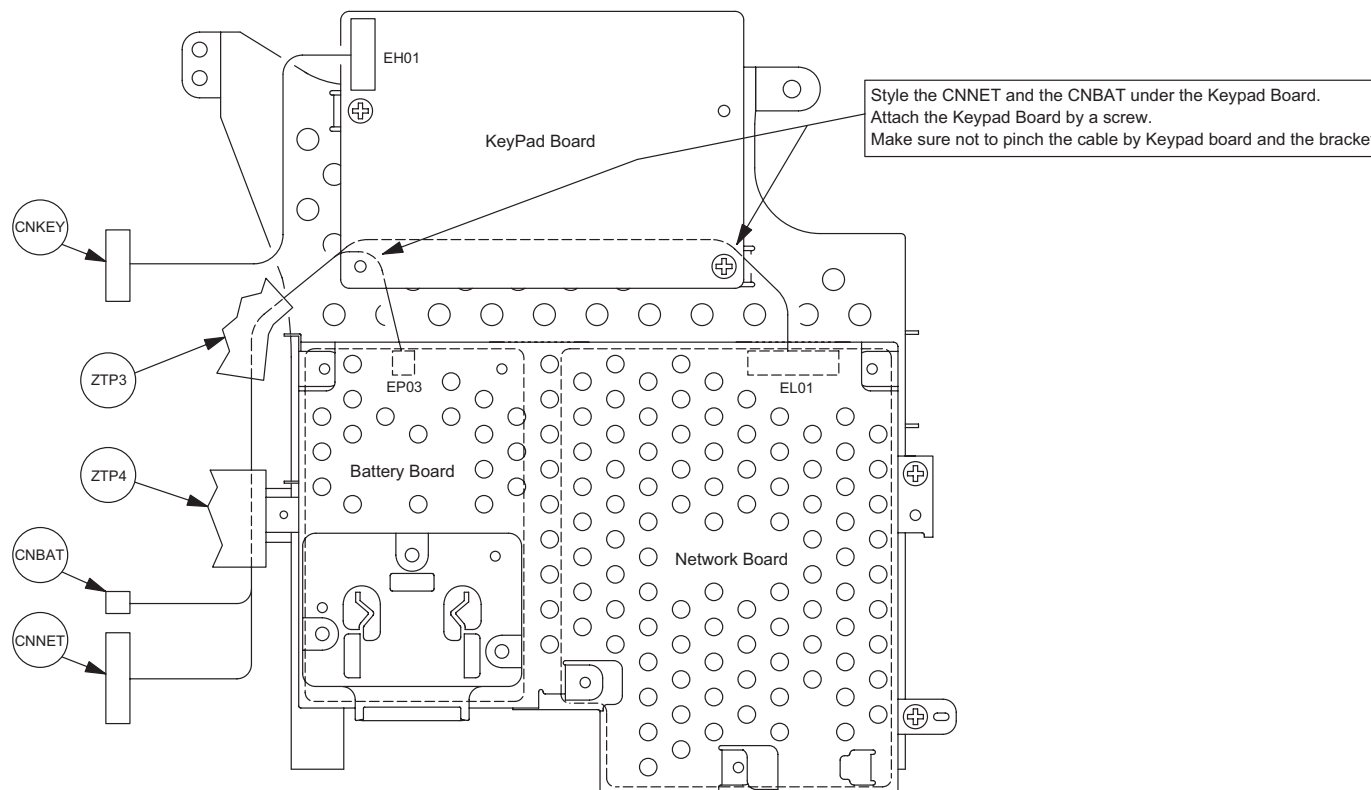
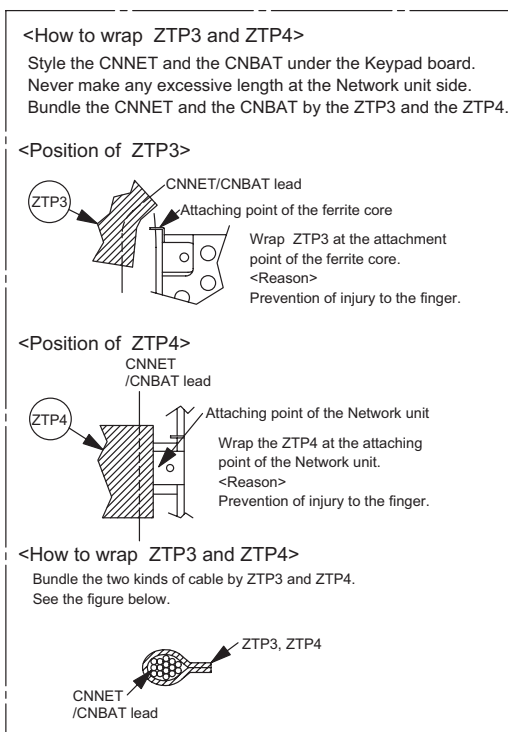


Wiring diagram 10

## Preparation of the Network Unit and the Keypad Board

### Wiring of the Network Unit and the Keypad Board

- (1) Attach the Network unit to the bracket.
- (2) Attach the Keypad Board styling the CNET and the CNBAT.
- (3) Bundle the CNET and the CNBAT by the ZTP3.  
Prevention of injury to the finger.
- (4) Bundle the CNET and the CNBAT by the ZTP4.  
Prevention of injury to the finger.

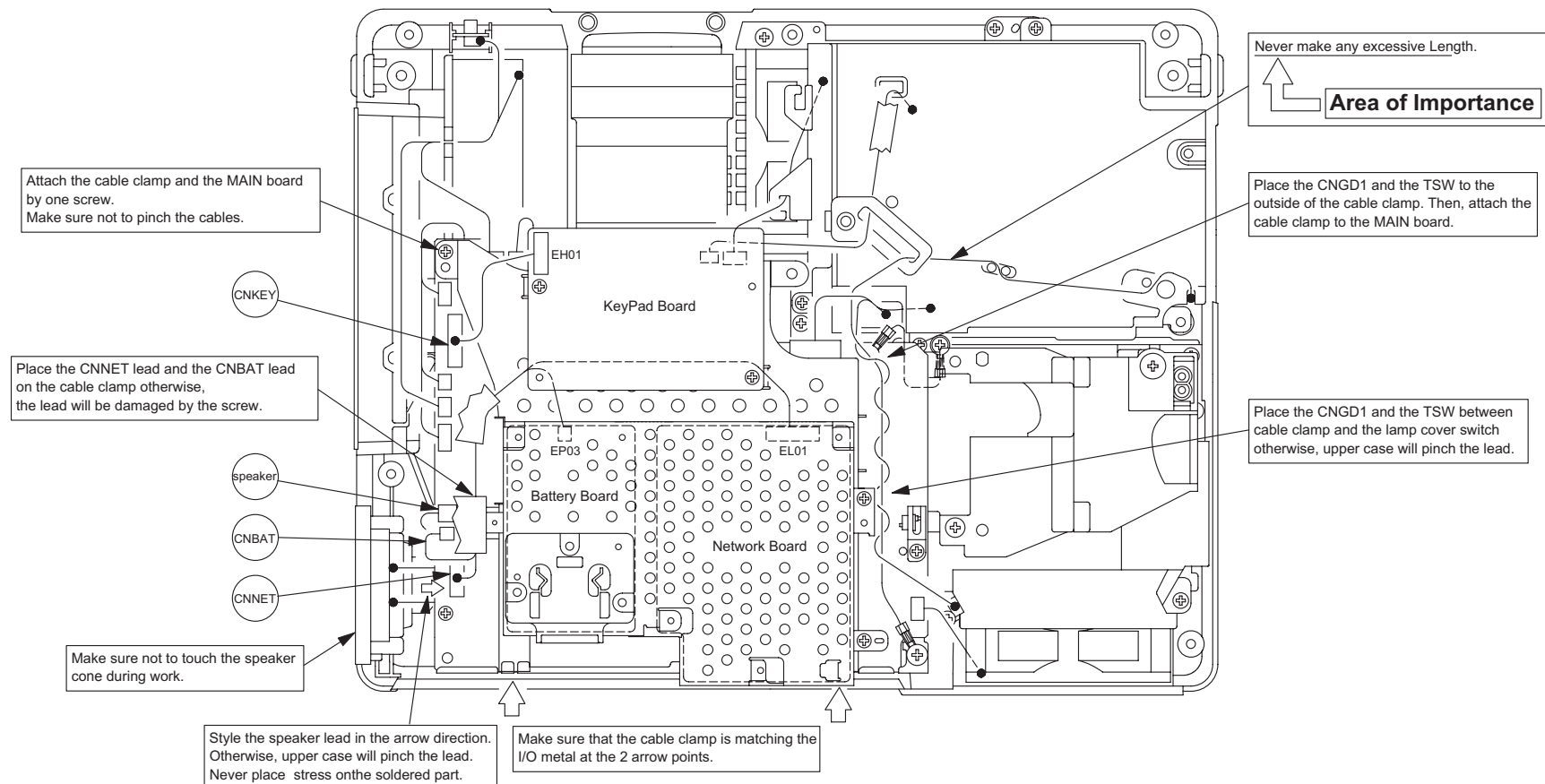


Wiring diagram 11

## Assembling the Network Unit

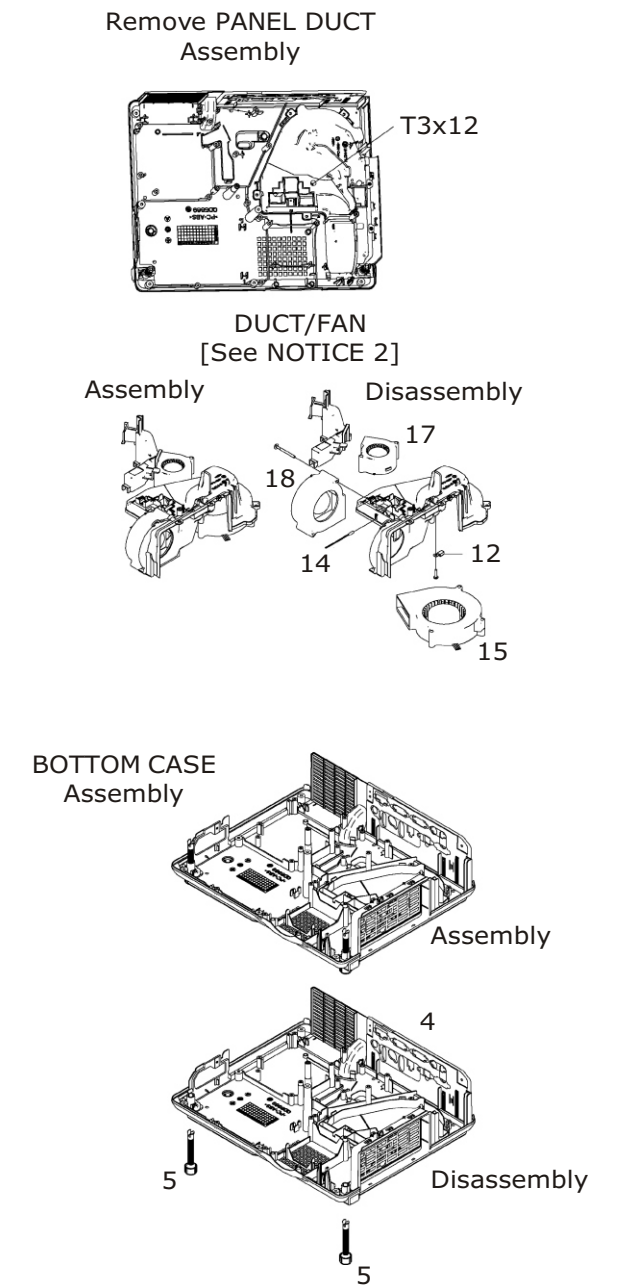
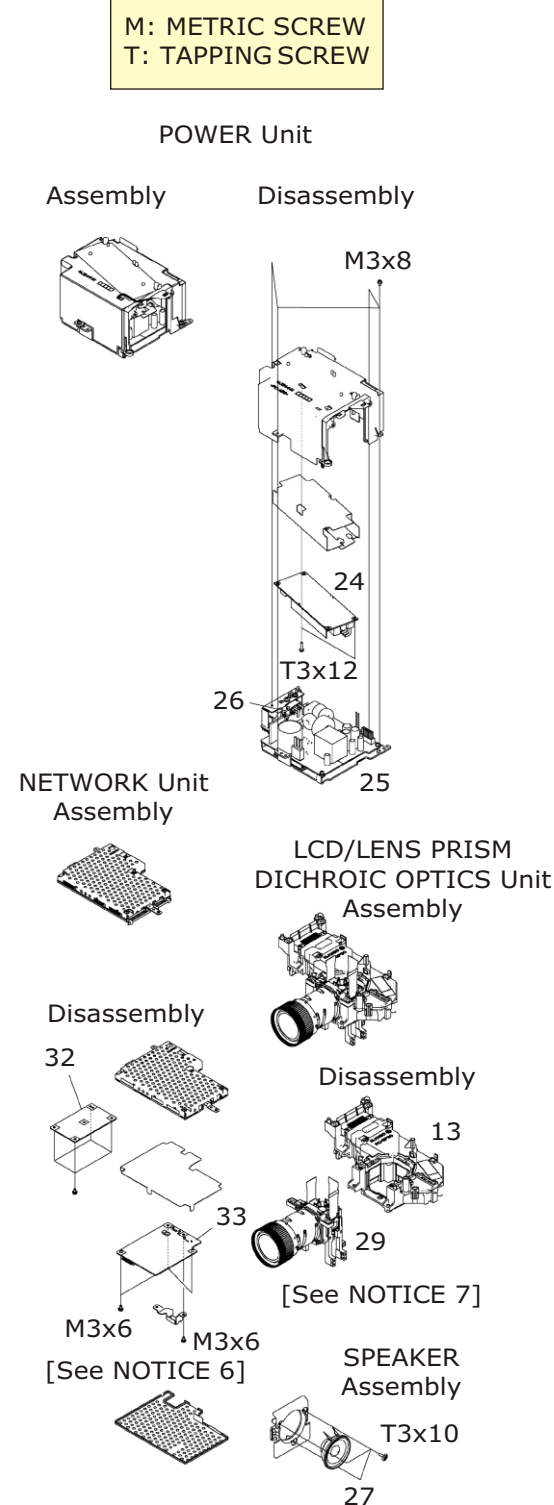
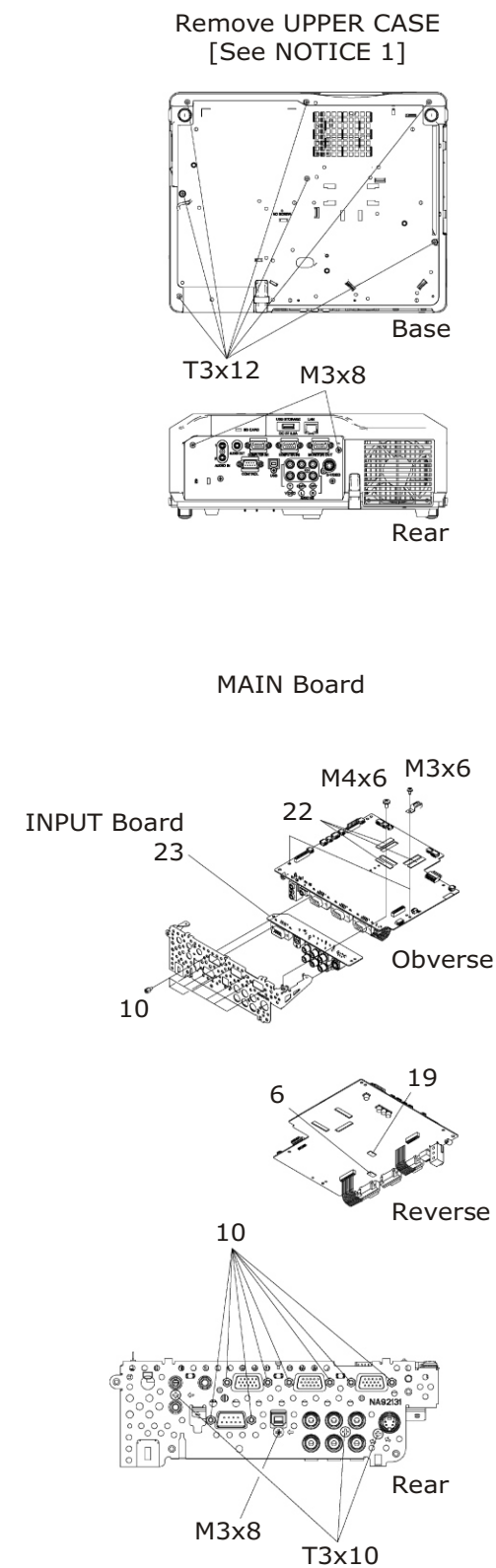
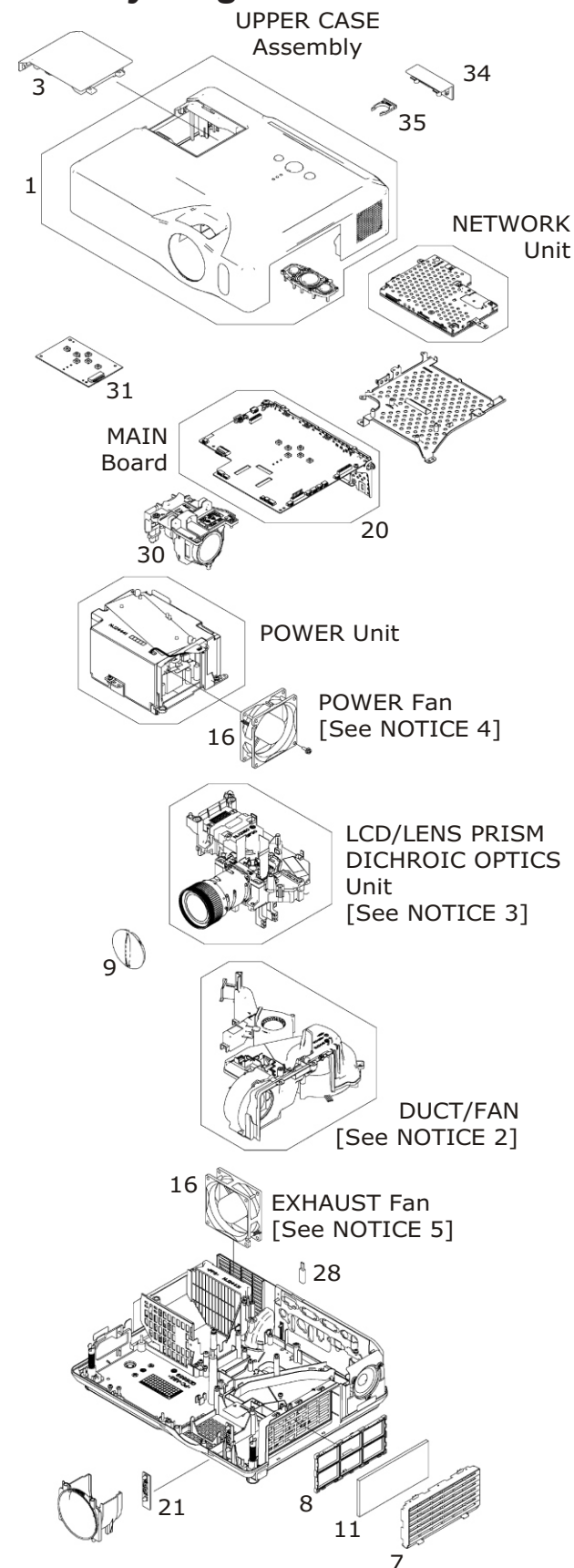
### Wiring when assembling the Network Unit

- (1) Attach the Network unit and the Keypad board to the cable clamp.  
Attach the bracket on the Main board by a screw.  
Make sure not to move the Main board when attaching the cable clamp  
otherwise, the flexible cable of the LCD panel will be damaged.
- (2) Connect CNKEY, CNBAT and CNNET.
- (3) Connect the speaker connector after styling the cables that are connected to the  
MAIN Board.



Wiring diagram 12

## 8. Disassembly diagram



FOR NOTICES, REFER TO 'DISASSEMBLY' IN THE 'SERVICING' SECTION OF THIS MANUAL

## Disassembly Notices

### 1. Detaching and attaching the UPPER CASE.

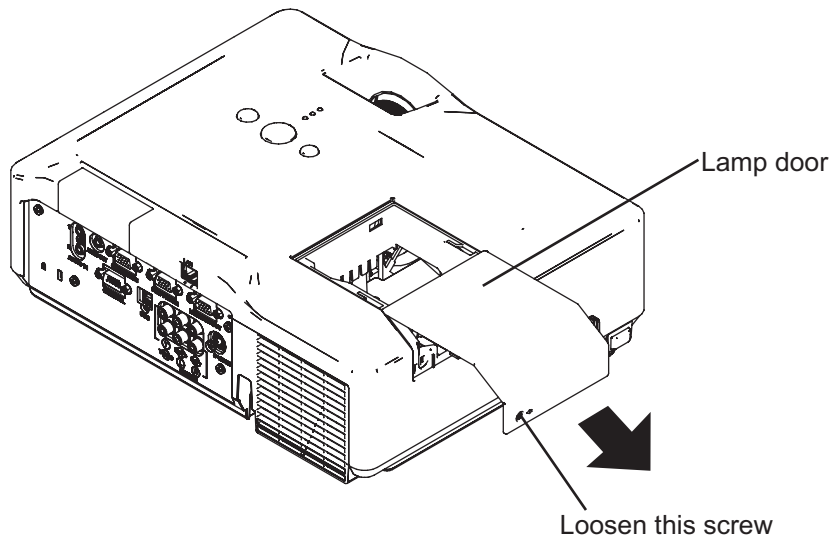
Follow the procedure below to detach and attach the upper case.

When disassembling

- a. Remove the Lamp door.

#### ⚠ CAUTION

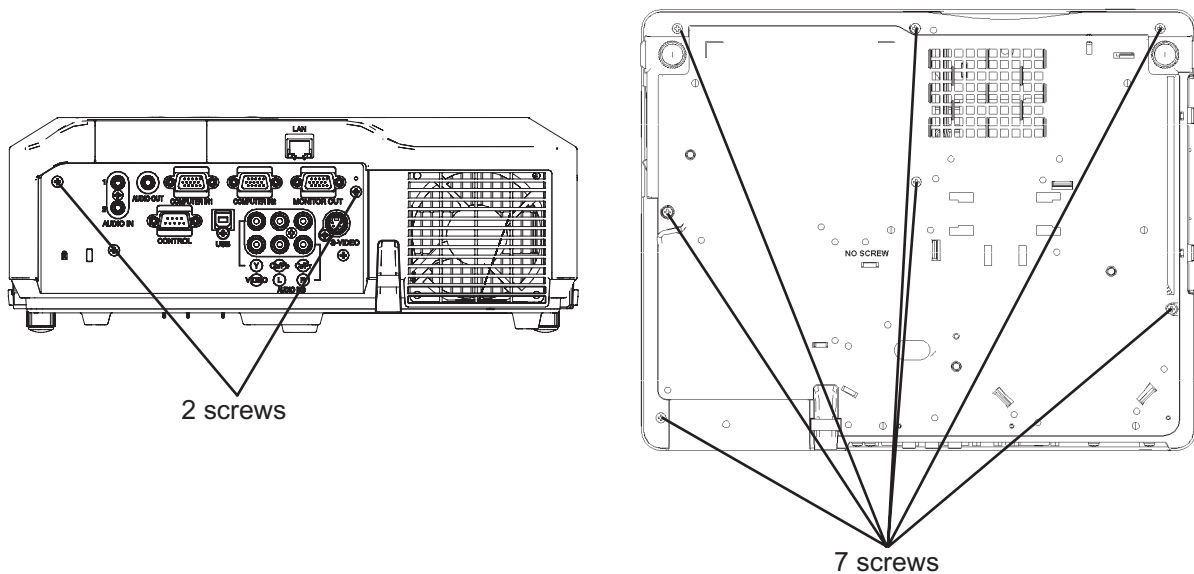
The lamp door must be removed before the upper case when disassembling the machine. If the upper case is detached with the lamp door installed, the MAIN board might be damaged.



- b. Remove 7 screws on the bottom and 3 screws on the rear to detach the upper case.

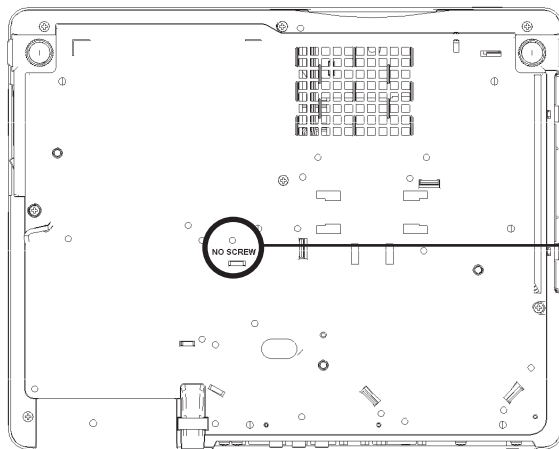
#### ⚠ CAUTION

These are not screw holes. Do NOT insert a screw or screwdriver into them to avoid damaging the inside.



**When assembling**

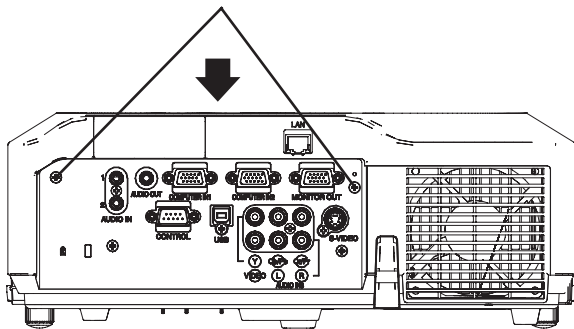
- a. Tighten 7 screws on the bottom and 2 screws on the rear after attaching the upper case with the lamp door separated.



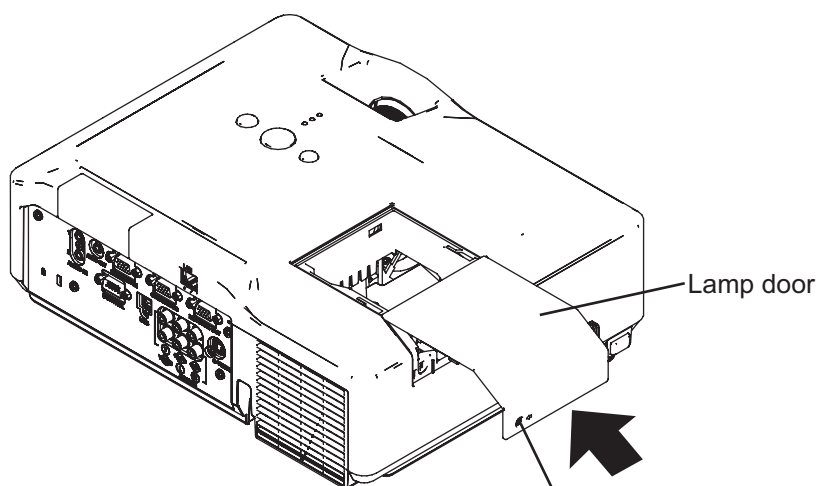
**! CAUTION**

These are not screw holes. Do NOT insert a screw or screwdriver into them to avoid damaging the inside.

In order not to make a gap between the upper and the bottom cases, tighten these screws while pressing down the upper case in the direction of the arrow. Be careful not to bend the outside casing. (Torque:0.39-0.59N•m)



- b. Attach the Lamp door.



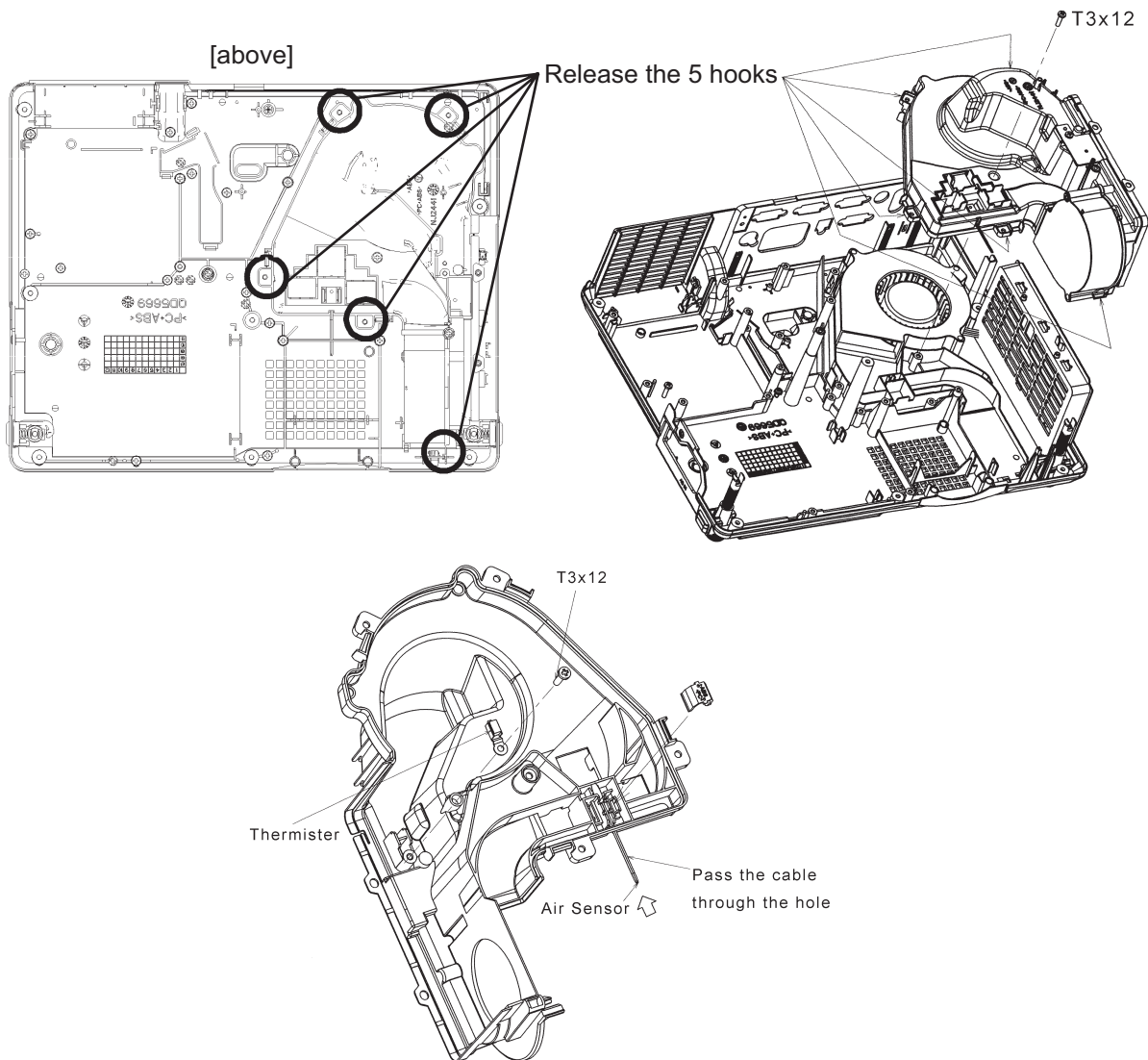
**! CAUTION**

Tighten this screw using a manual screwdriver.

## 2. Detaching and attaching the Panel Fan Duct Assembly

### When disassembling

Remove 1 screws and unhook the panel fan duct assembly as shown in the diagram.

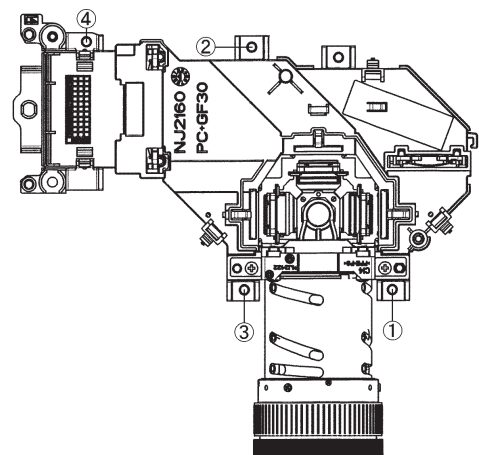


### When assembling

(1) Put the thermistor and Air sensor in the correct position on the Panel duct as shown in the diagram.

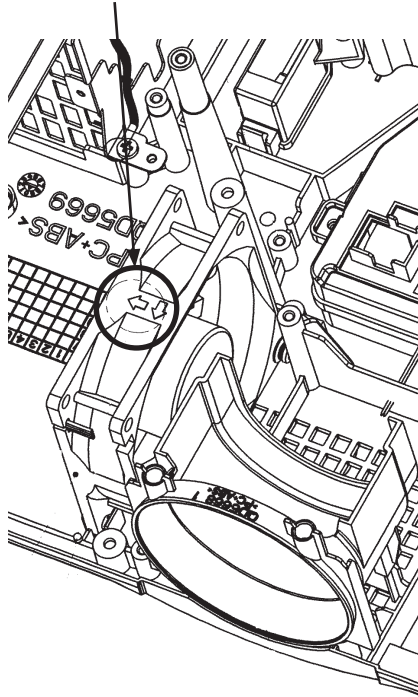
## 3. Attaching the Dichroic Optics Unit

Put the dichroic optics unit on the bottom case and tighten screws in order of 1, 2, 3 and 4 as shown in the diagram.



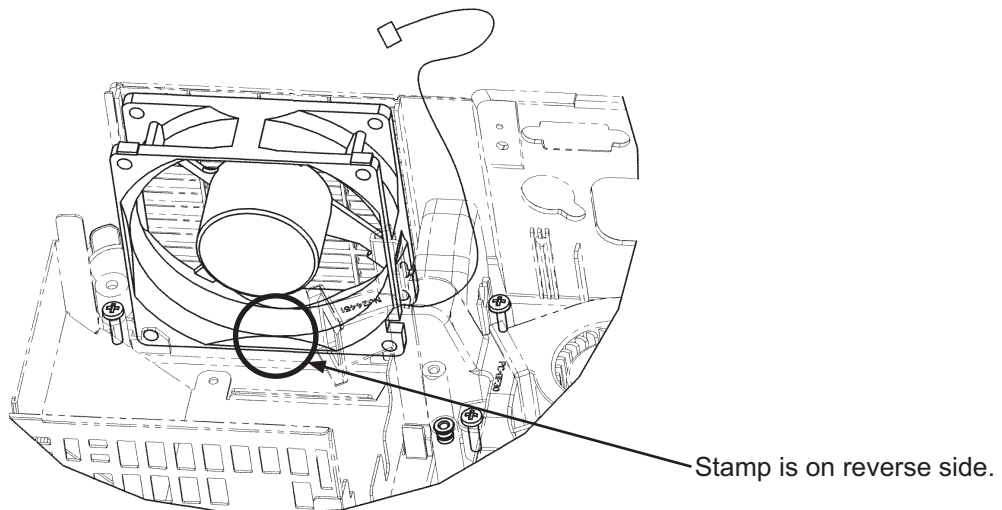
#### 4. Attaching the Power Unit FAN.

Never attach the FAN to the wrong direction.  
Refer the stamp on the FAN when attaching the Power Unit FAN.



#### 5. Attaching the Exhaust FAN.

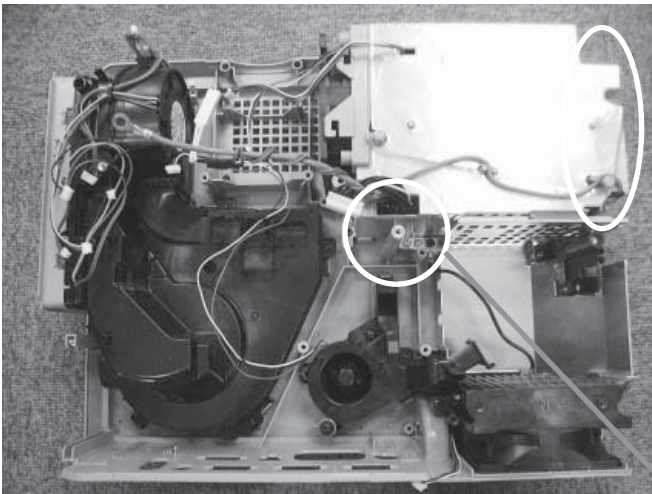
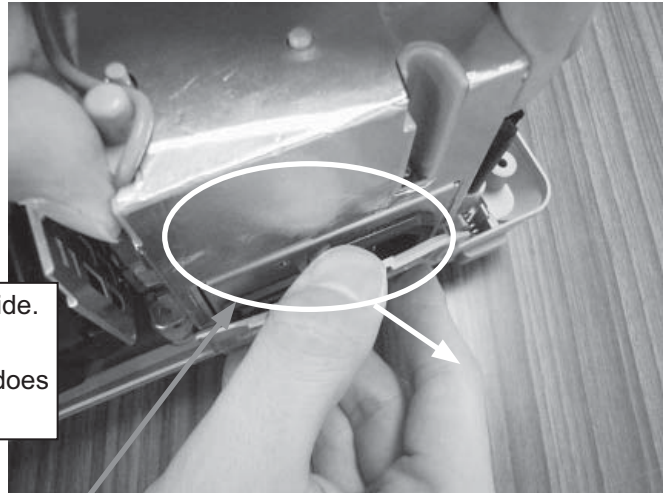
Never attach the FAN to the wrong direction.  
Refer the diagram when attaching the Exhaust FAN.



## 6. Attaching the Power Unit.

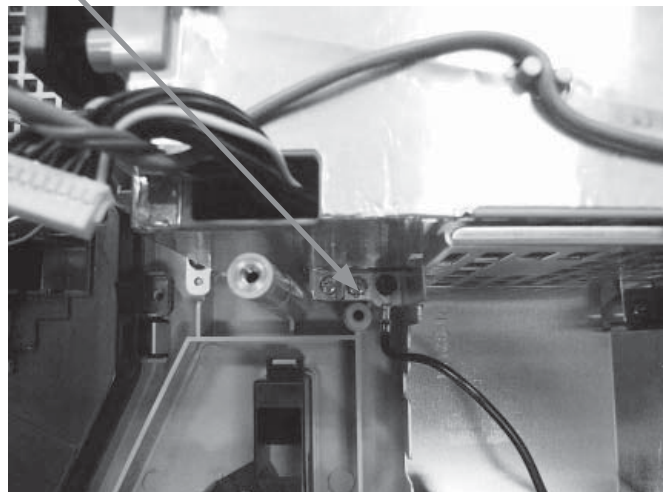
Refer the diagram when attaching the Power Unit.

Pull the AC inlet frame to the outside.  
Then, attach the power unit.  
Make sure that the bottom case does  
not come in contact with AC SW.



### CAUTION

Never use the wrong screws.  
Use M3 x 6 with lock washer.

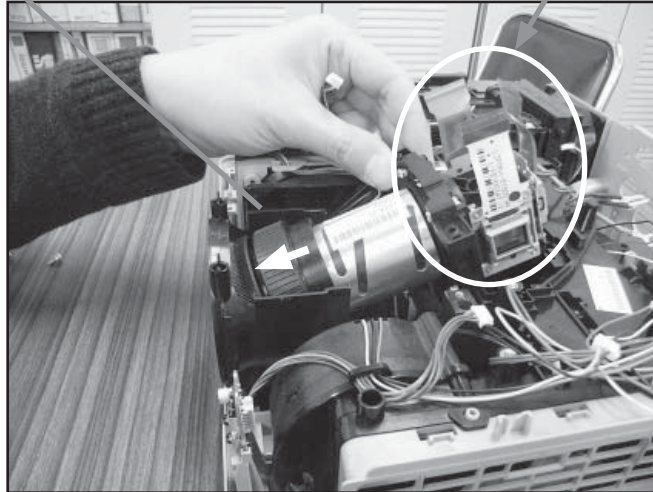


## 7. Attaching the Lens Prism Assmebly

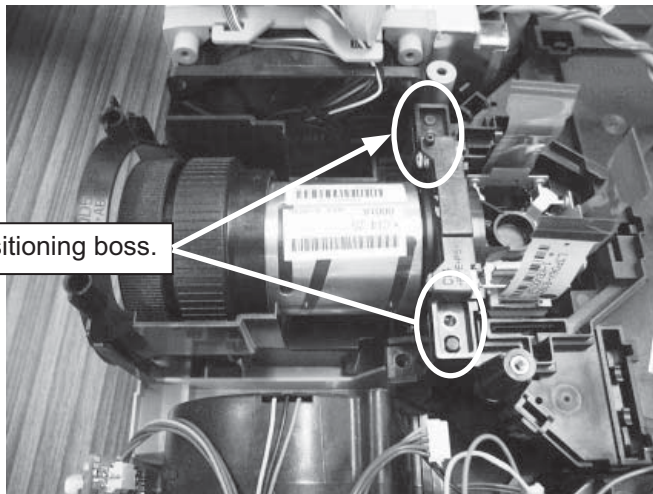
Refer the diagram when attaching the Lens Prism Assembly

(2) Attach the LCD Prism Assembly inserting the top of the Lens to the lens enclosure.

Never touch the LCD to any parts when attaching the LCD Prism Assembly.

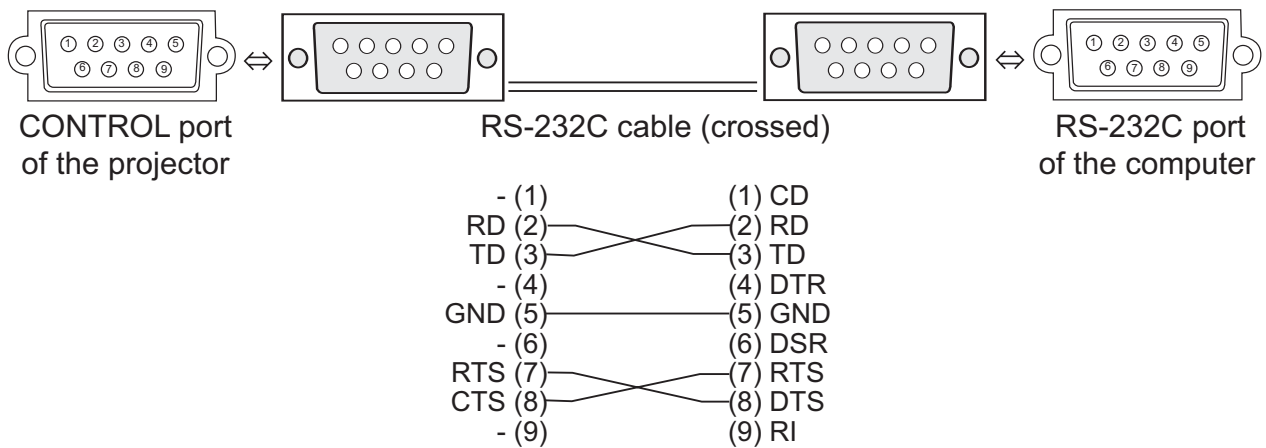


Insert vertically to the positioning boss.



**THE UPDATED PARTS LIST  
FOR THIS MODEL IS  
AVAILABLE ON ESTA**

## 10. RS-232C communication



### Connecting the cable

1. Turn off the projector and the computer.
2. Connect the CONTROL port of the projector with a RS-232C port of the computer by a RS-232C cable (crossed). Use the cable that fulfills the specification shown in the previous page.
3. Turn on the computer and after the computer has started up turn on the projector.

### Communications setting

19200bps, 8N1

#### 1. Protocol

Consist of header (7 bytes) + command data (6 bytes)

#### 2. Header

BE + EF + 03 + 06 + 00 + CRC\_low + CRC\_high

CRC\_low: Lower byte of CRC flag for command data

CRC\_high: Upper byte of CRC flag for command data

#### 3. Command data

Command data chart

| byte_0 | byte_1 | byte_2 | byte_3 | byte_4       | byte_5 |
|--------|--------|--------|--------|--------------|--------|
| Action |        | Type   |        | Setting code |        |
| low    | high   | low    | high   | low          | high   |

Action (byte\_0 - 1)

| Action | Classification | Content                              |
|--------|----------------|--------------------------------------|
| 1      | Set            | Change setting to desired value.     |
| 2      | Get            | Read projector internal setup value. |
| 4      | Increment      | Increment setup value by 1.          |
| 5      | Decrement      | Decrement setup value by 1.          |
| 6      | Execute        | Run a command.                       |

#### Requesting projector status (Get command)

- (1) Send the following request code from the PC to the projector.  
*Header + Command data ('02H' + '00H' + type (2 bytes) + '00H' + '00H')*
- (2) The projector returns the response code '1DH' + data (2 bytes) to the PC.

#### Changing the projector settings (Set command)

- (1) Send the following setting code from the PC to the projector.  
*Header + Command data ('01H' + '00H' + type (2 bytes) + setting code (2 bytes))*
- (2) The projector changes the setting based on the above setting code.
- (3) The projector returns the response code '06H' to the PC.

#### Using the projector default settings (Reset Command)

- (1) The PC sends the following default setting code to the projector.  
*Header + Command data ('06H' + '00H' + type (2 bytes) + '00H' + '00H')*
- (2) The projector changes the specified setting to the default value.
- (3) The projector returns the response code '06H' to the PC.

#### Increasing the projector setting value (Increment command)

- (1) The PC sends the following increment code to the projector.  
*Header + Command data ('04H' + '00H' + type (2 bytes) + '00H' + '00H')*
- (2) The projector increases the setting value on the above setting code.
- (3) The projector returns the response code '06H' to the PC.

#### Decreasing the projector setting value (Decrement command)

- (1) The PC sends the following decrement code to the projector.  
*Header + Command data ('05H' + '00H' + type (2 bytes) + '00H' + '00H')*
- (2) The projector decreases the setting value on the above setting code.
- (3) The projector returns the response code '06H' to the PC.

#### When the projector cannot understand the received command

When the projector cannot understand the received command, the error code '15H' is sent back to the PC. Sometimes the projector cannot properly receive the command. In such a case, the command is not executed and the error code '15H' is sent back to the PC. If this error code is returned, send the same command again.

#### When the projector cannot execute the received command.

When the projector cannot execute the received command, the error code '1CH' + 'xxxxH' is sent back to the PC.

When the data length is greater than indicated by the data length code, the projector ignore the excess data code. Conversely when the data length is shorter than indicated by the data length code, an error code will be returned to the PC.

**NOTE** • Operation cannot be guaranteed when the projector receives an undefined command or data.

- Provide an interval of at least 40ms between the response code and any other code.
- The projector outputs test data when the power supply is switched ON and when the lamp is lit. Ignore this data.
- Commands are not accepted during warm-up.

**CP-X205W (C14-20N) / CP-X305W (C14-25N)**

● **Command data chart**

| Names            | Operation Type | Header                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |    |       | Command Data |       |              |       |
|------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|-------|--------------|-------|--------------|-------|
|                  |                | CRC                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |    |       | Action       | Type  | Setting Code |       |
| Power            | Set            | Turn off                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | BE EF | 03 | 06 00 | 2A D3        | 01 00 | 00 60        | 00 00 |
|                  |                | Turn on                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | BE EF | 03 | 06 00 | BA D2        | 01 00 | 00 60        | 01 00 |
|                  | Get            | Get                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | BE EF | 03 | 06 00 | 19 D3        | 02 00 | 00 60        | 00 00 |
|                  |                | [Example return]<br>00 00                      01 00                      02 00<br>[On]                                              [Cool down]                                                                                                                                                                                                                                                                                                                                 |       |    |       |              |       |              |       |
| Input Source     | Set            | COMPUTER1                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BE EF | 03 | 06 00 | FE D2        | 01 00 | 00 20        | 00 00 |
|                  |                | COMPUTER2                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BE EF | 03 | 06 00 | 3E D0        | 01 00 | 00 20        | 04 00 |
|                  |                | COMPONENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BE EF | 03 | 06 00 | AE D1        | 01 00 | 00 20        | 05 00 |
|                  |                | S-VIDEO                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | BE EF | 03 | 06 00 | 9E D3        | 01 00 | 00 20        | 02 00 |
|                  |                | VIDEO                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | BE EF | 03 | 06 00 | 6E D3        | 01 00 | 00 20        | 01 00 |
|                  | Get            | Get                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | BE EF | 03 | 06 00 | CD D2        | 02 00 | 00 20        | 00 00 |
| Error Status     | Get            | Get                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | BE EF | 03 | 06 00 | D9 D8        | 02 00 | 20 60        | 00 00 |
|                  |                | [Example return]<br>00 00                      01 00                      02 00                      03 00<br>[Normal]                      [Cover error]                      [Fan error]                      [Lamp error]<br>04 00                      05 00                      06 00                      07 00<br>[Temp error]                      [Air flow error]                      [Lamp time error]                      [Cold error]<br>08 00<br>[Filter error] |       |    |       |              |       |              |       |
| BRIGHTNESS       | Get            | Get                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | BE EF | 03 | 06 00 | 89 D2        | 02 00 | 03 20        | 00 00 |
|                  |                | Increment                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BE EF | 03 | 06 00 | EF D2        | 04 00 | 03 20        | 00 00 |
|                  |                | Decrement                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BE EF | 03 | 06 00 | 3E D3        | 05 00 | 03 20        | 00 00 |
| BRIGHTNESS Reset | Execute        | Execute                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | BE EF | 03 | 06 00 | 58 D3        | 06 00 | 00 70        | 00 00 |
| CONTRAST         | Get            | Get                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | BE EF | 03 | 06 00 | FD D3        | 02 00 | 04 20        | 00 00 |
|                  |                | Increment                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BE EF | 03 | 06 00 | 9B D3        | 04 00 | 04 20        | 00 00 |
|                  |                | Decrement                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BE EF | 03 | 06 00 | 4A D2        | 05 00 | 04 20        | 00 00 |
| CONTRAST Reset   | Execute        | Execute                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | BE EF | 03 | 06 00 | A4 D2        | 06 00 | 01 70        | 00 00 |
| PICTURE MODE     | Set            | NORMAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | BE EF | 03 | 06 00 | 23 F6        | 01 00 | BA 30        | 00 00 |
|                  |                | CINEMA                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | BE EF | 03 | 06 00 | B3 F7        | 01 00 | BA 30        | 01 00 |
|                  |                | DYNAMIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | BE EF | 03 | 06 00 | E3 F4        | 01 00 | BA 30        | 04 00 |
|                  |                | BOARD(BLACK)                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | BE EF | 03 | 06 00 | E3 EF        | 01 00 | BA 30        | 20 00 |
|                  |                | BOARD(GREEN)                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | BE EF | 03 | 06 00 | 73 EE        | 01 00 | BA 30        | 21 00 |
|                  |                | WHITEBOARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BE EF | 03 | 06 00 | 83 EE        | 01 00 | BA 30        | 22 00 |
|                  |                | DAYTIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | BE EF | 03 | 06 00 | E3 C7        | 01 00 | BA 30        | 40 00 |
|                  | Get            | Get                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | BE EF | 03 | 06 00 | 10 F6        | 02 00 | BA 30        | 00 00 |
|                  |                | [Example return]<br>00 00                      01 00                      04 00                      10 00<br>[Normal]                      [Cinema]                      [Dynamic]                      [Custom]<br>20 00                      21 00                      22 00                      40 00<br>[BOARD(BLACK)]                      [BOARD(GREEN)]                      [WHITEBOARD]                      [DAY TIME]                                              |       |    |       |              |       |              |       |
| GAMMA            | Set            | #1 DEFAULT                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BE EF | 03 | 06 00 | 07 E9        | 01 00 | A1 30        | 20 00 |
|                  |                | #1 CUSTOM                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BE EF | 03 | 06 00 | 07 FD        | 01 00 | A1 30        | 10 00 |
|                  |                | #2 DEFAULT                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BE EF | 03 | 06 00 | 97 E8        | 01 00 | A1 30        | 21 00 |
|                  |                | #2 CUSTOM                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BE EF | 03 | 06 00 | 97 FC        | 01 00 | A1 30        | 11 00 |
|                  |                | #3 DEFAULT                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BE EF | 03 | 06 00 | 67 E8        | 01 00 | A1 30        | 22 00 |
|                  |                | #3 CUSTOM                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BE EF | 03 | 06 00 | 67 FC        | 01 00 | A1 30        | 12 00 |
|                  |                | #4 DEFAULT                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BE EF | 03 | 06 00 | F7 E9        | 01 00 | A1 30        | 23 00 |
|                  |                | #4 CUSTOM                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BE EF | 03 | 06 00 | F7 FD        | 01 00 | A1 30        | 13 00 |
|                  |                | #5 DEFAULT                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BE EF | 03 | 06 00 | C7 EB        | 01 00 | A1 30        | 24 00 |
|                  |                | #5 CUSTOM                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BE EF | 03 | 06 00 | C7 FF        | 01 00 | A1 30        | 14 00 |
|                  |                | #6 DEFAULT                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BE EF | 03 | 06 00 | 57 EA        | 01 00 | A1 30        | 25 00 |
|                  |                | #6 CUSTOM                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BE EF | 03 | 06 00 | 57 FE        | 01 00 | A1 30        | 15 00 |
|                  | Get            | Get                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | BE EF | 03 | 06 00 | F4 F0        | 02 00 | A1 30        | 00 00 |

**CP-X205W (C14-20N) / CP-X305W (C14-25N)**

| Names              | Operation Type | Header                 |       |    |       |       | Command Data |       |              |
|--------------------|----------------|------------------------|-------|----|-------|-------|--------------|-------|--------------|
|                    |                | CRC                    |       |    |       |       | Action       | Type  | Setting Code |
| User Gamma Pattern | Set            | Off                    | BE EF | 03 | 06 00 | FB FA | 01 00        | 80 30 | 00 00        |
|                    |                | 9 step gray scale      | BE EF | 03 | 06 00 | 6B FB | 01 00        | 80 30 | 01 00        |
|                    |                | 15 steps gray scale    | BE EF | 03 | 06 00 | 9B FB | 01 00        | 80 30 | 02 00        |
|                    |                | Ramp                   | BE EF | 03 | 06 00 | 0B FA | 01 00        | 80 30 | 03 00        |
|                    | Get            |                        | BE EF | 03 | 06 00 | C8 FA | 02 00        | 80 30 | 00 00        |
| User Gamma Point 1 | Get            |                        | BE EF | 03 | 06 00 | 08 FE | 02 00        | 90 30 | 00 00        |
|                    | Increment      |                        | BE EF | 03 | 06 00 | 6E FE | 04 00        | 90 30 | 00 00        |
|                    | Decrement      |                        | BE EF | 03 | 06 00 | BF FF | 05 00        | 90 30 | 00 00        |
| User Gamma Point 2 | Get            |                        | BE EF | 03 | 06 00 | F4 FF | 02 00        | 91 30 | 00 00        |
|                    | Increment      |                        | BE EF | 03 | 06 00 | 92 FF | 04 00        | 91 30 | 00 00        |
|                    | Decrement      |                        | BE EF | 03 | 06 00 | 43 FE | 05 00        | 91 30 | 00 00        |
| User Gamma Point 3 | Get            |                        | BE EF | 03 | 06 00 | B0 FF | 02 00        | 92 30 | 00 00        |
|                    | Increment      |                        | BE EF | 03 | 06 00 | D6 FF | 04 00        | 92 30 | 00 00        |
|                    | Decrement      |                        | BE EF | 03 | 06 00 | 07 FE | 05 00        | 92 30 | 00 00        |
| User Gamma Point 4 | Get            |                        | BE EF | 03 | 06 00 | 4C FE | 02 00        | 93 30 | 00 00        |
|                    | Increment      |                        | BE EF | 03 | 06 00 | 2A FE | 04 00        | 93 30 | 00 00        |
|                    | Decrement      |                        | BE EF | 03 | 06 00 | FB FF | 05 00        | 93 30 | 00 00        |
| User Gamma Point 5 | Get            |                        | BE EF | 03 | 06 00 | 38 FF | 02 00        | 94 30 | 00 00        |
|                    | Increment      |                        | BE EF | 03 | 06 00 | 5E FF | 04 00        | 94 30 | 00 00        |
|                    | Decrement      |                        | BE EF | 03 | 06 00 | 8F FE | 05 00        | 94 30 | 00 00        |
| User Gamma Point 6 | Get            |                        | BE EF | 03 | 06 00 | C4 FE | 02 00        | 95 30 | 00 00        |
|                    | Increment      |                        | BE EF | 03 | 06 00 | A2 FE | 04 00        | 95 30 | 00 00        |
|                    | Decrement      |                        | BE EF | 03 | 06 00 | 73 FF | 05 00        | 95 30 | 00 00        |
| User Gamma Point 7 | Get            |                        | BE EF | 03 | 06 00 | 80 FE | 02 00        | 96 30 | 00 00        |
|                    | Increment      |                        | BE EF | 03 | 06 00 | E6 FE | 04 00        | 96 30 | 00 00        |
|                    | Decrement      |                        | BE EF | 03 | 06 00 | 37 FF | 05 00        | 96 30 | 00 00        |
| User Gamma Point 8 | Get            |                        | BE EF | 03 | 06 00 | 7C FF | 02 00        | 97 30 | 00 00        |
|                    | Increment      |                        | BE EF | 03 | 06 00 | 1A FF | 04 00        | 97 30 | 00 00        |
|                    | Decrement      |                        | BE EF | 03 | 06 00 | CB FE | 05 00        | 97 30 | 00 00        |
| COLOR TEMP         | Set            | HIGH                   | BE EF | 03 | 06 00 | 0B F5 | 01 00        | B0 30 | 03 00        |
|                    |                | CUSTOM-1 (HIGH)        | BE EF | 03 | 06 00 | CB F8 | 01 00        | B0 30 | 13 00        |
|                    |                | MID                    | BE EF | 03 | 06 00 | 9B F4 | 01 00        | B0 30 | 02 00        |
|                    |                | CUSTOM-2 (MID)         | BE EF | 03 | 06 00 | 5B F9 | 01 00        | B0 30 | 12 00        |
|                    |                | LOW                    | BE EF | 03 | 06 00 | 6B F4 | 01 00        | B0 30 | 01 00        |
|                    |                | CUSTOM-3 (LOW)         | BE EF | 03 | 06 00 | AB F9 | 01 00        | B0 30 | 11 00        |
|                    |                | Hi-BRIGHT-1            | BE EF | 03 | 06 00 | 3B F2 | 01 00        | B0 30 | 08 00        |
|                    |                | CUSTOM-4 (Hi-BRIGHT-1) | BE EF | 03 | 06 00 | FB FF | 01 00        | B0 30 | 18 00        |
|                    |                | Hi-BRIGHT-2            | BE EF | 03 | 06 00 | AB F3 | 01 00        | B0 30 | 09 00        |
|                    |                | CUSTOM-5 (Hi-BRIGHT-2) | BE EF | 03 | 06 00 | 6B FE | 01 00        | B0 30 | 19 00        |
|                    |                | Hi-BRIGHT-3            | BE EF | 03 | 06 00 | 5B F3 | 01 00        | B0 30 | 0A 00        |
|                    |                | CUSTOM-6 (Hi-BRIGHT-3) | BE EF | 03 | 06 00 | 9B FE | 01 00        | B0 30 | 1A 00        |
|                    | Get            |                        | BE EF | 03 | 06 00 | C8 F5 | 02 00        | B0 30 | 00 00        |
| COLOR TEMP GAIN R  | Get            |                        | BE EF | 03 | 06 00 | 34 F4 | 02 00        | B1 30 | 00 00        |
|                    | Increment      |                        | BE EF | 03 | 06 00 | 52 F4 | 04 00        | B1 30 | 00 00        |
|                    | Decrement      |                        | BE EF | 03 | 06 00 | 83 F5 | 05 00        | B1 30 | 00 00        |
| COLOR TEMP GAIN G  | Get            |                        | BE EF | 03 | 06 00 | 70 F4 | 02 00        | B2 30 | 00 00        |
|                    | Increment      |                        | BE EF | 03 | 06 00 | 16 F4 | 04 00        | B2 30 | 00 00        |
|                    | Decrement      |                        | BE EF | 03 | 06 00 | C7 F5 | 05 00        | B2 30 | 00 00        |

**CP-X205W (C14-20N) / CP-X305W (C14-25N)**

| Names               | Operation Type | Header   |       |       |       | Command Data |       |              |
|---------------------|----------------|----------|-------|-------|-------|--------------|-------|--------------|
|                     |                |          |       |       | CRC   | Action       | Type  | Setting Code |
| COLOR TEMP GAIN B   | Get            | BE EF    | 03    | 06 00 | 8C F5 | 02 00        | B3 30 | 00 00        |
|                     | Increment      | BE EF    | 03    | 06 00 | EA F5 | 04 00        | B3 30 | 00 00        |
|                     | Decrement      | BE EF    | 03    | 06 00 | 3B F4 | 05 00        | B3 30 | 00 00        |
| COLOR TEMP OFFSET R | Get            | BE EF    | 03    | 06 00 | 04 F5 | 02 00        | B5 30 | 00 00        |
|                     | Increment      | BE EF    | 03    | 06 00 | 62 F5 | 04 00        | B5 30 | 00 00        |
|                     | Decrement      | BE EF    | 03    | 06 00 | B3 F4 | 05 00        | B5 30 | 00 00        |
| COLOR TEMP OFFSET G | Get            | BE EF    | 03    | 06 00 | 40 F5 | 02 00        | B6 30 | 00 00        |
|                     | Increment      | BE EF    | 03    | 06 00 | 26 F5 | 04 00        | B6 30 | 00 00        |
|                     | Decrement      | BE EF    | 03    | 06 00 | F7 F4 | 05 00        | B6 30 | 00 00        |
| COLOR TEMP OFFSET B | Get            | BE EF    | 03    | 06 00 | BC F4 | 02 00        | B7 30 | 00 00        |
|                     | Increment      | BE EF    | 03    | 06 00 | DA F4 | 04 00        | B7 30 | 00 00        |
|                     | Decrement      | BE EF    | 03    | 06 00 | 0B F5 | 05 00        | B7 30 | 00 00        |
| COLOR               | Get            | BE EF    | 03    | 06 00 | B5 72 | 02 00        | 02 22 | 00 00        |
|                     | Increment      | BE EF    | 03    | 06 00 | D3 72 | 04 00        | 02 22 | 00 00        |
|                     | Decrement      | BE EF    | 03    | 06 00 | 02 73 | 05 00        | 02 22 | 00 00        |
| COLOR Reset         | Execute        | BE EF    | 03    | 06 00 | 80 D0 | 06 00        | 0A 70 | 00 00        |
| TINT                | Get            | BE EF    | 03    | 06 00 | 49 73 | 02 00        | 03 22 | 00 00        |
|                     | Increment      | BE EF    | 03    | 06 00 | 2F 73 | 04 00        | 03 22 | 00 00        |
|                     | Decrement      | BE EF    | 03    | 06 00 | FE 72 | 05 00        | 03 22 | 00 00        |
| TINT Reset          | Execute        | BE EF    | 03    | 06 00 | 7C D1 | 06 00        | 0B 70 | 00 00        |
| SHARPNESS           | Get            | BE EF    | 03    | 06 00 | F1 72 | 02 00        | 01 22 | 00 00        |
|                     | Increment      | BE EF    | 03    | 06 00 | 97 72 | 04 00        | 01 22 | 00 00        |
|                     | Decrement      | BE EF    | 03    | 06 00 | 46 73 | 05 00        | 01 22 | 00 00        |
| SHARPNESS Reset     | Execute        | BE EF    | 03    | 06 00 | C4 D0 | 06 00        | 09 70 | 00 00        |
| MY MEMORY Load      | Set            | 1        | BE EF | 03    | 06 00 | 0E D7        | 01 00 | 14 20        |
|                     |                | 2        | BE EF | 03    | 06 00 | 9E D6        | 01 00 | 14 20        |
|                     |                | 3        | BE EF | 03    | 06 00 | 6E D6        | 01 00 | 14 20        |
|                     |                | 4        | BE EF | 03    | 06 00 | FE D7        | 01 00 | 14 20        |
| MY MEMORY Save      | Set            | 1        | BE EF | 03    | 06 00 | F2 D6        | 01 00 | 15 20        |
|                     |                | 2        | BE EF | 03    | 06 00 | 62 D7        | 01 00 | 15 20        |
|                     |                | 3        | BE EF | 03    | 06 00 | 92 D7        | 01 00 | 15 20        |
|                     |                | 4        | BE EF | 03    | 06 00 | 02 D6        | 01 00 | 15 20        |
| PROGRESSIVE         | Set            | TURN OFF | BE EF | 03    | 06 00 | 4A 72        | 01 00 | 07 22        |
|                     |                | TV       | BE EF | 03    | 06 00 | DA 73        | 01 00 | 07 22        |
|                     |                | FILM     | BE EF | 03    | 06 00 | 2A 73        | 01 00 | 07 22        |
|                     | Get            |          | BE EF | 03    | 06 00 | 79 72        | 02 00 | 07 22        |
| VIDEO NR            | Set            | LOW      | BE EF | 03    | 06 00 | 26 72        | 01 00 | 06 22        |
|                     |                | MID      | BE EF | 03    | 06 00 | D6 72        | 01 00 | 06 22        |
|                     |                | HIGH     | BE EF | 03    | 06 00 | 46 73        | 01 00 | 06 22        |
|                     | Get            |          | BE EF | 03    | 06 00 | 85 73        | 02 00 | 06 22        |
| ASPECT              | Set            | 4:3      | BE EF | 03    | 06 00 | 9E D0        | 01 00 | 08 20        |
|                     |                | 16:9     | BE EF | 03    | 06 00 | 0E D1        | 01 00 | 08 20        |
|                     |                | 14:9     | BE EF | 03    | 06 00 | CE D6        | 01 00 | 08 20        |
|                     |                | SMALL    | BE EF | 03    | 06 00 | FE D1        | 01 00 | 08 20        |
|                     |                | NORMAL   | BE EF | 03    | 06 00 | 5E DD        | 01 00 | 08 20        |
|                     | Get            |          | BE EF | 03    | 06 00 | AD D0        | 02 00 | 08 20        |

**CP-X205W (C14-20N) / CP-X305W (C14-25N)**

| Names            | Operation Type | Header    |       |       |       | Command Data |       |              |
|------------------|----------------|-----------|-------|-------|-------|--------------|-------|--------------|
|                  |                |           |       |       | CRC   | Action       | Type  | Setting Code |
| OVER SCAN        | Get            | BE EF     | 03    | 06 00 | 91 70 | 02 00        | 09 22 | 00 00        |
|                  | Increment      | BE EF     | 03    | 06 00 | F7 70 | 04 00        | 09 22 | 00 00        |
|                  | Decrement      | BE EF     | 03    | 06 00 | 26 71 | 05 00        | 09 22 | 00 00        |
| OVER SCAN Reset  | Execute        | BE EF     | 03    | 06 00 | EC D9 | 06 00        | 27 70 | 00 00        |
| V POSITION       | Get            | BE EF     | 03    | 06 00 | 0D 83 | 02 00        | 00 21 | 00 00        |
|                  | Increment      | BE EF     | 03    | 06 00 | 6B 83 | 04 00        | 00 21 | 00 00        |
|                  | Decrement      | BE EF     | 03    | 06 00 | BA 82 | 05 00        | 00 21 | 00 00        |
| V POSITION Reset | Execute        | BE EF     | 03    | 06 00 | E0 D2 | 06 00        | 02 70 | 00 00        |
| H POSITION       | Get            | BE EF     | 03    | 06 00 | F1 82 | 02 00        | 01 21 | 00 00        |
|                  | Increment      | BE EF     | 03    | 06 00 | 97 82 | 04 00        | 01 21 | 00 00        |
|                  | Decrement      | BE EF     | 03    | 06 00 | 46 83 | 05 00        | 01 21 | 00 00        |
| H POSITION Reset | Execute        | BE EF     | 03    | 06 00 | 1C D3 | 06 00        | 03 70 | 00 00        |
| H PHASE          | Get            | BE EF     | 03    | 06 00 | 49 83 | 02 00        | 03 21 | 00 00        |
|                  | Increment      | BE EF     | 03    | 06 00 | 2F 83 | 04 00        | 03 21 | 00 00        |
|                  | Decrement      | BE EF     | 03    | 06 00 | FE 82 | 05 00        | 03 21 | 00 00        |
| H SIZE           | Get            | BE EF     | 03    | 06 00 | B5 82 | 02 00        | 02 21 | 00 00        |
|                  | Increment      | BE EF     | 03    | 06 00 | D3 82 | 04 00        | 02 21 | 00 00        |
|                  | Decrement      | BE EF     | 03    | 06 00 | 02 83 | 05 00        | 02 21 | 00 00        |
| H SIZE Reset     | Execute        | BE EF     | 03    | 06 00 | 68 D2 | 06 00        | 04 70 | 00 00        |
| AUTO ADJUST      | Execute        | BE EF     | 03    | 06 00 | 91 D0 | 06 00        | 0A 20 | 00 00        |
| COLOR SPACE      | Set            | AUTO      | BE EF | 03    | 06 00 | 0E 72        | 01 00 | 04 22        |
|                  |                | RGB       | BE EF | 03    | 06 00 | 9E 73        | 01 00 | 04 22        |
|                  |                | SMPTE240  | BE EF | 03    | 06 00 | 6E 73        | 01 00 | 04 22        |
|                  |                | REC709    | BE EF | 03    | 06 00 | FE 72        | 01 00 | 04 22        |
|                  |                | REC601    | BE EF | 03    | 06 00 | CE 70        | 01 00 | 04 22        |
|                  | Get            | BE EF     | 03    | 06 00 | 3D 72 | 02 00        | 04 22 | 00 00        |
| COMPONENT        | Set            | COMPONENT | BE EF | 03    | 06 00 | 4A D7        | 01 00 | 17 20        |
|                  |                | SCART RGB | BE EF | 03    | 06 00 | DA D6        | 01 00 | 17 20        |
|                  | Get            | BE EF     | 03    | 06 00 | 79 D7 | 02 00        | 17 20 | 00 00        |
| C-VIDEO FORMAT   | Set            | AUTO      | BE EF | 03    | 06 00 | A2 70        | 01 00 | 11 22        |
|                  |                | NTSC      | BE EF | 03    | 06 00 | C2 74        | 01 00 | 11 22        |
|                  |                | PAL       | BE EF | 03    | 06 00 | 52 75        | 01 00 | 11 22        |
|                  |                | SECAM     | BE EF | 03    | 06 00 | 52 70        | 01 00 | 11 22        |
|                  |                | NTSC4.43  | BE EF | 03    | 06 00 | 62 77        | 01 00 | 11 22        |
|                  |                | M-PAL     | BE EF | 03    | 06 00 | C2 71        | 01 00 | 11 22        |
|                  |                | N-PAL     | BE EF | 03    | 06 00 | 32 74        | 01 00 | 11 22        |
|                  | Get            | BE EF     | 03    | 06 00 | 31 76 | 02 00        | 11 22 | 00 00        |
| S-VIDEO FORMAT   | Set            | AUTO      | BE EF | 03    | 06 00 | E6 70        | 01 00 | 12 22        |
|                  |                | NTSC      | BE EF | 03    | 06 00 | 86 74        | 01 00 | 12 22        |
|                  |                | PAL       | BE EF | 03    | 06 00 | 16 75        | 01 00 | 12 22        |
|                  |                | SECAM     | BE EF | 03    | 06 00 | 16 70        | 01 00 | 12 22        |
|                  |                | NTSC4.43  | BE EF | 03    | 06 00 | 26 77        | 01 00 | 12 22        |
|                  |                | M-PAL     | BE EF | 03    | 06 00 | 86 71        | 01 00 | 12 22        |
|                  |                | N-PAL     | BE EF | 03    | 06 00 | 76 74        | 01 00 | 12 22        |
|                  | Get            | BE EF     | 03    | 06 00 | 75 76 | 02 00        | 12 22 | 00 00        |
| FRAME LOCK       | Set            | TURN OFF  | BE EF | 03    | 06 00 | CB D6        | 01 00 | 14 30        |
|                  |                | TURN ON   | BE EF | 03    | 06 00 | 5B D7        | 01 00 | 14 30        |
|                  | Get            | BE EF     | 03    | 06 00 | F8 D6 | 02 00        | 14 30 | 00 00        |

**CP-X205W (C14-20N) / CP-X305W (C14-25N)**

| Names                 | Operation Type |               | Header |    |       |       | Command Data |       |              |
|-----------------------|----------------|---------------|--------|----|-------|-------|--------------|-------|--------------|
|                       |                |               |        |    |       |       | Action       | Type  | Setting Code |
| COMPUTER IN1          | Set            | SYNC ON G ON  | BE EF  | 03 | 06 00 | CE D6 | 01 00        | 10 20 | 03 00        |
|                       |                | SYNC ON G OFF | BE EF  | 03 | 06 00 | 5E D7 | 01 00        | 10 20 | 02 00        |
|                       | Get            |               | BE EF  | 03 | 06 00 | 0D D6 | 02 00        | 10 20 | 00 00        |
| COMPUTER IN2          | Set            | SYNC ON G ON  | BE EF  | 03 | 06 00 | 32 D7 | 01 00        | 11 20 | 03 00        |
|                       |                | SYNC ON G OFF | BE EF  | 03 | 06 00 | A2 D6 | 01 00        | 11 20 | 02 00        |
|                       | Get            |               | BE EF  | 03 | 06 00 | F1 D7 | 02 00        | 11 20 | 00 00        |
| KEYSTONE V            | Get            |               | BE EF  | 03 | 06 00 | B9 D3 | 02 00        | 07 20 | 00 00        |
|                       | Increment      |               | BE EF  | 03 | 06 00 | DF D3 | 04 00        | 07 20 | 00 00        |
|                       | Decrement      |               | BE EF  | 03 | 06 00 | 0E D2 | 05 00        | 07 20 | 00 00        |
| KEYSTONE V Reset      | Execute        |               | BE EF  | 03 | 06 00 | 08 D0 | 06 00        | 0C 70 | 00 00        |
| AUTO KEYSTONE EXECUTE | Execute        |               | BE EF  | 03 | 06 00 | E5 D1 | 06 00        | 0D 20 | 00 00        |
| WHISPER               | Set            | NORMAL        | BE EF  | 03 | 06 00 | 3B 23 | 01 00        | 00 33 | 00 00        |
|                       |                | WHISPER       | BE EF  | 03 | 06 00 | AB 22 | 01 00        | 00 33 | 01 00        |
|                       | Get            |               | BE EF  | 03 | 06 00 | 08 23 | 02 00        | 00 33 | 00 00        |
| MIRROR                | Set            | NORMAL        | BE EF  | 03 | 06 00 | C7 D2 | 01 00        | 01 30 | 00 00        |
|                       |                | H:INVERT      | BE EF  | 03 | 06 00 | 57 D3 | 01 00        | 01 30 | 01 00        |
|                       |                | V:INVERT      | BE EF  | 03 | 06 00 | A7 D3 | 01 00        | 01 30 | 02 00        |
|                       |                | H&V:INVERT    | BE EF  | 03 | 06 00 | 37 D2 | 01 00        | 01 30 | 03 00        |
|                       | Get            |               | BE EF  | 03 | 06 00 | F4 D2 | 02 00        | 01 30 | 00 00        |
| VOLUME-COMPUTER1      | Get            |               | BE EF  | 03 | 06 00 | CD CC | 02 00        | 60 20 | 00 00        |
|                       | Increment      |               | BE EF  | 03 | 06 00 | AB CC | 04 00        | 60 20 | 00 00        |
|                       | Decrement      |               | BE EF  | 03 | 06 00 | 7A CD | 05 00        | 60 20 | 00 00        |
| VOLUME-COMPUTER2      | Get            |               | BE EF  | 03 | 06 00 | FD CD | 02 00        | 64 20 | 00 00        |
|                       | Increment      |               | BE EF  | 03 | 06 00 | 9B CD | 04 00        | 64 20 | 00 00        |
|                       | Decrement      |               | BE EF  | 03 | 06 00 | 4A CC | 05 00        | 64 20 | 00 00        |
| VOLUME-COMPONENT      | Get            |               | BE EF  | 03 | 06 00 | 01 CC | 02 00        | 65 20 | 00 00        |
|                       | Increment      |               | BE EF  | 03 | 06 00 | 67 CC | 04 00        | 65 20 | 00 00        |
|                       | Decrement      |               | BE EF  | 03 | 06 00 | B6 CD | 05 00        | 65 20 | 00 00        |
| VOLUME-S-Video        | Get            |               | BE EF  | 03 | 06 00 | 75 CD | 02 00        | 62 20 | 00 00        |
|                       | Increment      |               | BE EF  | 03 | 06 00 | 13 CD | 04 00        | 62 20 | 00 00        |
|                       | Decrement      |               | BE EF  | 03 | 06 00 | C2 CC | 05 00        | 62 20 | 00 00        |
| VOLUME-Video          | Get            |               | BE EF  | 03 | 06 00 | 31 CD | 02 00        | 61 20 | 00 00        |
|                       | Increment      |               | BE EF  | 03 | 06 00 | 57 CD | 04 00        | 61 20 | 00 00        |
|                       | Decrement      |               | BE EF  | 03 | 06 00 | 86 CC | 05 00        | 61 20 | 00 00        |
| MUTE                  | Set            | TURN OFF      | BE EF  | 03 | 06 00 | 46 D3 | 01 00        | 02 20 | 00 00        |
|                       |                | TURN ON       | BE EF  | 03 | 06 00 | D6 D2 | 01 00        | 02 20 | 01 00        |
|                       | Get            |               | BE EF  | 03 | 06 00 | 75 D3 | 02 00        | 02 20 | 00 00        |
| SPEAKER               | Set            | TURN ON       | BE EF  | 03 | 06 00 | FE D4 | 01 00        | 1C 20 | 01 00        |
|                       |                | TURN OFF      | BE EF  | 03 | 06 00 | 6E D5 | 01 00        | 1C 20 | 00 00        |
|                       | Get            |               | BE EF  | 03 | 06 00 | 5D D5 | 02 00        | 1C 20 | 00 00        |

**CP-X205W (C14-20N) / CP-X305W (C14-25N)**

| Names                     | Operation Type |          | Header |    |       |       | Command Data |       |              |
|---------------------------|----------------|----------|--------|----|-------|-------|--------------|-------|--------------|
|                           |                |          |        |    |       |       | Action       | Type  | Setting Code |
| AUDIO-COMPUTER1           | Set            | AUDIO1   | BE EF  | 03 | 06 00 | 6E DC | 01 00        | 30 20 | 01 00        |
|                           |                | AUDIO2   | BE EF  | 03 | 06 00 | 9E DC | 01 00        | 30 20 | 02 00        |
|                           |                | AUDIO3   | BE EF  | 03 | 06 00 | 0E DD | 01 00        | 30 20 | 03 00        |
|                           |                | Turn off | BE EF  | 03 | 06 00 | FE DD | 01 00        | 30 20 | 00 00        |
|                           | Get            |          | BE EF  | 03 | 06 00 | CD DD | 02 00        | 30 20 | 00 00        |
| AUDIO-COMPUTER2           | Set            | AUDIO1   | BE EF  | 03 | 06 00 | 5E DD | 01 00        | 34 20 | 01 00        |
|                           |                | AUDIO2   | BE EF  | 03 | 06 00 | AE DD | 01 00        | 34 20 | 02 00        |
|                           |                | AUDIO3   | BE EF  | 03 | 06 00 | 3E DC | 01 00        | 34 20 | 03 00        |
|                           |                | Turn off | BE EF  | 03 | 06 00 | CE DC | 01 00        | 34 20 | 00 00        |
|                           | Get            |          | BE EF  | 03 | 06 00 | FD DC | 02 00        | 34 20 | 00 00        |
| AUDIO-COMPONENT           | Set            | AUDIO1   | BE EF  | 03 | 06 00 | A2 DC | 01 00        | 35 20 | 01 00        |
|                           |                | AUDIO2   | BE EF  | 03 | 06 00 | 52 DC | 01 00        | 35 20 | 02 00        |
|                           |                | AUDIO3   | BE EF  | 03 | 06 00 | C2 DD | 01 00        | 35 20 | 03 00        |
|                           |                | Turn off | BE EF  | 03 | 06 00 | 32 DD | 01 00        | 35 20 | 00 00        |
|                           | Get            |          | BE EF  | 03 | 06 00 | 01 DD | 02 00        | 35 20 | 00 00        |
| AUDIO-S-VIDEO             | Set            | AUDIO1   | BE EF  | 03 | 06 00 | D6 DD | 01 00        | 32 20 | 01 00        |
|                           |                | AUDIO2   | BE EF  | 03 | 06 00 | 26 DD | 01 00        | 32 20 | 02 00        |
|                           |                | AUDIO3   | BE EF  | 03 | 06 00 | B6 DC | 01 00        | 32 20 | 03 00        |
|                           |                | Turn off | BE EF  | 03 | 06 00 | 46 DC | 01 00        | 32 20 | 00 00        |
|                           | Get            |          | BE EF  | 03 | 06 00 | 75 DC | 02 00        | 32 20 | 00 00        |
| AUDIO-VIDEO               | Set            | AUDIO1   | BE EF  | 03 | 06 00 | 92 DD | 01 00        | 31 20 | 01 00        |
|                           |                | AUDIO2   | BE EF  | 03 | 06 00 | 62 DD | 01 00        | 31 20 | 02 00        |
|                           |                | AUDIO3   | BE EF  | 03 | 06 00 | F2 DC | 01 00        | 31 20 | 03 00        |
|                           |                | Turn off | BE EF  | 03 | 06 00 | 02 DC | 01 00        | 31 20 | 00 00        |
|                           | Get            |          | BE EF  | 03 | 06 00 | 31 DC | 02 00        | 31 20 | 00 00        |
| IR REMOTE FREQ.<br>NORMAL | Set            | Off      | BE EF  | 03 | 06 00 | FF 3D | 01 00        | 30 26 | 00 00        |
|                           |                | On       | BE EF  | 03 | 06 00 | 6F 3C | 01 00        | 30 26 | 01 00        |
|                           | Get            |          | BE EF  | 03 | 06 00 | CC 3D | 02 00        | 30 26 | 00 00        |
| IR REMOTE FREQ.<br>HIGH   | Set            | Off      | BE EF  | 03 | 06 00 | 03 3C | 01 00        | 31 26 | 00 00        |
|                           |                | On       | BE EF  | 03 | 06 00 | 93 3D | 01 00        | 31 26 | 01 00        |
|                           | Get            |          | BE EF  | 03 | 06 00 | 30 3C | 02 00        | 31 26 | 00 00        |

**CP-X205W (C14-20N) / CP-X305W (C14-25N)**

| Names                 | Operation Type | Header     |       |    |       |       | Command Data |       |              |
|-----------------------|----------------|------------|-------|----|-------|-------|--------------|-------|--------------|
|                       |                |            |       |    |       | CRC   | Action       | Type  | Setting Code |
| LANGUAGE              | Set            | ENGLISH    | BE EF | 03 | 06 00 | F7 D3 | 01 00        | 05 30 | 00 00        |
|                       |                | FRANÇAIS   | BE EF | 03 | 06 00 | 67 D2 | 01 00        | 05 30 | 01 00        |
|                       |                | DEUTSCH    | BE EF | 03 | 06 00 | 97 D2 | 01 00        | 05 30 | 02 00        |
|                       |                | ESPAÑOL    | BE EF | 03 | 06 00 | 07 D3 | 01 00        | 05 30 | 03 00        |
|                       |                | ITALIANO   | BE EF | 03 | 06 00 | 37 D1 | 01 00        | 05 30 | 04 00        |
|                       |                | NORSK      | BE EF | 03 | 06 00 | A7 D0 | 01 00        | 05 30 | 05 00        |
|                       |                | NEDERLANDS | BE EF | 03 | 06 00 | 57 D0 | 01 00        | 05 30 | 06 00        |
|                       |                | PORTUGUÊS  | BE EF | 03 | 06 00 | C7 D1 | 01 00        | 05 30 | 07 00        |
|                       |                | 日本語        | BE EF | 03 | 06 00 | 37 D4 | 01 00        | 05 30 | 08 00        |
|                       |                | 简体中文       | BE EF | 03 | 06 00 | A7 D5 | 01 00        | 05 30 | 09 00        |
|                       |                | 繁體中文       | BE EF | 03 | 06 00 | 37 DE | 01 00        | 05 30 | 10 00        |
|                       |                | 한글         | BE EF | 03 | 06 00 | 57 D5 | 01 00        | 05 30 | 0A 00        |
|                       |                | SVENSKA    | BE EF | 03 | 06 00 | C7 D4 | 01 00        | 05 30 | 0B 00        |
|                       |                | РУССКИЙ    | BE EF | 03 | 06 00 | F7 D6 | 01 00        | 05 30 | 0C 00        |
|                       |                | SUOMI      | BE EF | 03 | 06 00 | 67 D7 | 01 00        | 05 30 | 0D 00        |
|                       |                | POLSKI     | BE EF | 03 | 06 00 | 97 D7 | 01 00        | 05 30 | 0E 00        |
|                       |                | TÜRKÇE     | BE EF | 03 | 06 00 | 07 D6 | 01 00        | 05 30 | 0F 00        |
|                       | Get            |            | BE EF | 03 | 06 00 | C4 D3 | 02 00        | 05 30 | 00 00        |
| MENU POSITION H       | Get            |            | BE EF | 03 | 06 00 | 04 D7 | 02 00        | 15 30 | 00 00        |
|                       | Increment      |            | BE EF | 03 | 06 00 | 62 D7 | 04 00        | 15 30 | 00 00        |
|                       | Decrement      |            | BE EF | 03 | 06 00 | B3 D6 | 05 00        | 15 30 | 00 00        |
| MENU POSITION H Reset | Execute        |            | BE EF | 03 | 06 00 | DC C6 | 06 00        | 43 70 | 00 00        |
| MENU POSITION V       | Get            |            | BE EF | 03 | 06 00 | 40 D7 | 02 00        | 16 30 | 00 00        |
|                       | Increment      |            | BE EF | 03 | 06 00 | 26 D7 | 04 00        | 16 30 | 00 00        |
|                       | Decrement      |            | BE EF | 03 | 06 00 | F7 D6 | 05 00        | 16 30 | 00 00        |
| MENU POSITION V Reset | Execute        |            | BE EF | 03 | 06 00 | A8 C7 | 06 00        | 44 70 | 00 00        |
| BLANK                 | Set            | MyScreen   | BE EF | 03 | 06 00 | FB CA | 01 00        | 00 30 | 20 00        |
|                       |                | ORIGINAL   | BE EF | 03 | 06 00 | FB E2 | 01 00        | 00 30 | 40 00        |
|                       |                | BLUE       | BE EF | 03 | 06 00 | CB D3 | 01 00        | 00 30 | 03 00        |
|                       |                | WHITE      | BE EF | 03 | 06 00 | 6B D0 | 01 00        | 00 30 | 05 00        |
|                       |                | BLACK      | BE EF | 03 | 06 00 | 9B D0 | 01 00        | 00 30 | 06 00        |
|                       | Get            |            | BE EF | 03 | 06 00 | 08 D3 | 02 00        | 00 30 | 00 00        |
| BLANK On/Off          | Set            | TURN OFF   | BE EF | 03 | 06 00 | FB D8 | 01 00        | 20 30 | 00 00        |
|                       |                | TURN ON    | BE EF | 03 | 06 00 | 6B D9 | 01 00        | 20 30 | 01 00        |
|                       | Get            |            | BE EF | 03 | 06 00 | C8 D8 | 02 00        | 20 30 | 00 00        |
| START UP              | Set            | MyScreen   | BE EF | 03 | 06 00 | CB CB | 01 00        | 04 30 | 20 00        |
|                       |                | ORIGINAL   | BE EF | 03 | 06 00 | 0B D2 | 01 00        | 04 30 | 00 00        |
|                       |                | TURN OFF   | BE EF | 03 | 06 00 | 9B D3 | 01 00        | 04 30 | 01 00        |
|                       | Get            |            | BE EF | 03 | 06 00 | 38 D2 | 02 00        | 04 30 | 00 00        |
| MyScreen LOCK         | Set            | TURN OFF   | BE EF | 03 | 06 00 | 3B EF | 01 00        | C0 30 | 00 00        |
|                       |                | TURN ON    | BE EF | 03 | 06 00 | AB EE | 01 00        | C0 30 | 01 00        |
|                       | Get            |            | BE EF | 03 | 06 00 | 08 EF | 02 00        | C0 30 | 00 00        |
| MESSAGE               | Set            | TURN OFF   | BE EF | 03 | 06 00 | 8F D6 | 01 00        | 17 30 | 00 00        |
|                       |                | TURN ON    | BE EF | 03 | 06 00 | 1F D7 | 01 00        | 17 30 | 01 00        |
|                       | Get            |            | BE EF | 03 | 06 00 | BC D6 | 02 00        | 17 30 | 00 00        |
| AUTO SEARCH           | Set            | TURN OFF   | BE EF | 03 | 06 00 | B6 D6 | 01 00        | 16 20 | 00 00        |
|                       |                | TURN ON    | BE EF | 03 | 06 00 | 26 D7 | 01 00        | 16 20 | 01 00        |
|                       | Get            |            | BE EF | 03 | 06 00 | 85 D6 | 02 00        | 16 20 | 00 00        |

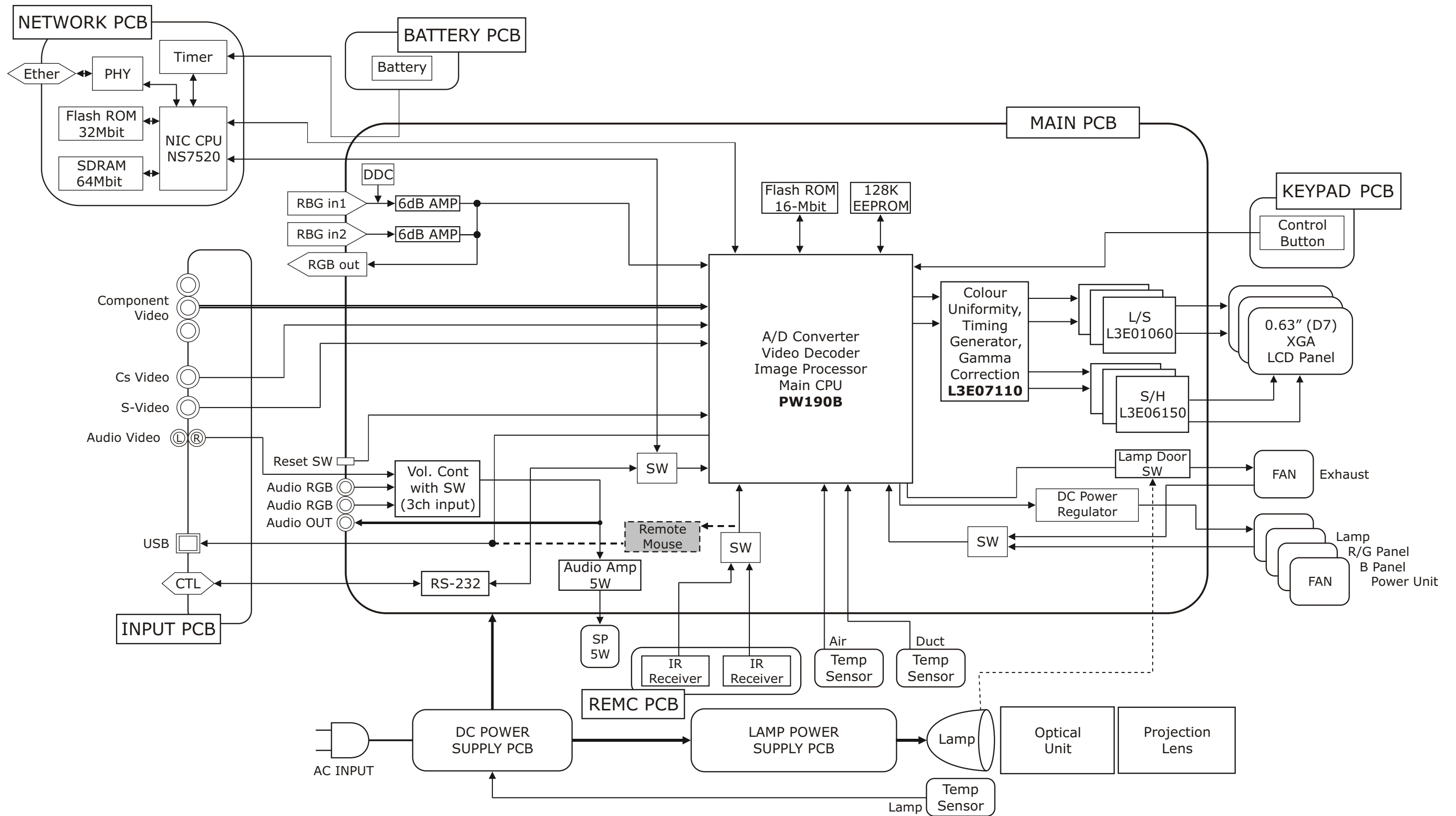
**CP-X205W (C14-20N) / CP-X305W (C14-25N)**

| Names            | Operation Type |                       | Header |    |       |       | Command Data |       |              |
|------------------|----------------|-----------------------|--------|----|-------|-------|--------------|-------|--------------|
|                  |                |                       |        |    |       |       | Action       | Type  | Setting Code |
| AUTO KEYSTONE    | Set            | TURN OFF              | BE EF  | 03 | 06 00 | EA D1 | 01 00        | 0F 20 | 00 00        |
|                  |                | TURN ON               | BE EF  | 03 | 06 00 | 7A D0 | 01 00        | 0F 20 | 01 00        |
|                  | Get            |                       | BE EF  | 03 | 06 00 | D9 D1 | 02 00        | 0F 20 | 00 00        |
| AUTO ON          | Set            | TURN OFF              | BE EF  | 03 | 06 00 | 3B 89 | 01 00        | 20 31 | 00 00        |
|                  |                | TURN ON               | BE EF  | 03 | 06 00 | AB 88 | 01 00        | 20 31 | 01 00        |
|                  | Get            |                       | BE EF  | 03 | 06 00 | 08 89 | 02 00        | 20 31 | 00 00        |
| AUTO OFF         | Get            |                       | BE EF  | 03 | 06 00 | 08 86 | 02 00        | 10 31 | 00 00        |
|                  | Increment      |                       | BE EF  | 03 | 06 00 | 6E 86 | 04 00        | 10 31 | 00 00        |
|                  | Decrement      |                       | BE EF  | 03 | 06 00 | BF 87 | 05 00        | 10 31 | 00 00        |
| LAMP TIME        | Get            |                       | BE EF  | 03 | 06 00 | C2 FF | 02 00        | 90 10 | 00 00        |
| LAMP TIME Reset  | Execute        |                       | BE EF  | 03 | 06 00 | 58 DC | 06 00        | 30 70 | 00 00        |
| FILTER TIME      | Get            |                       | BE EF  | 03 | 06 00 | C2 F0 | 02 00        | A0 10 | 00 00        |
| FILER TIME Reset | Execute        |                       | BE EF  | 03 | 06 00 | 98 C6 | 06 00        | 40 70 | 00 00        |
| MY BUTTON-1      |                | COMPUTER1             | BE EF  | 03 | 06 00 | 3A 33 | 01 00        | 00 36 | 00 00        |
|                  |                | COMPUTER2             | BE EF  | 03 | 06 00 | FA 31 | 01 00        | 00 36 | 04 00        |
|                  |                | COMPONENT             | BE EF  | 03 | 06 00 | 6A 30 | 01 00        | 00 36 | 05 00        |
|                  |                | S-VIDEO               | BE EF  | 03 | 06 00 | 5A 32 | 01 00        | 00 36 | 02 00        |
|                  |                | VIDEO                 | BE EF  | 03 | 06 00 | AA 32 | 01 00        | 00 36 | 01 00        |
|                  |                | INFORMATION           | BE EF  | 03 | 06 00 | FA 3E | 01 00        | 00 36 | 10 00        |
|                  |                | AUTO KEYSTONE EXECUTE | BE EF  | 03 | 06 00 | 6A 3F | 01 00        | 00 36 | 11 00        |
|                  |                | MY MEMORY             | BE EF  | 03 | 06 00 | 9A 3F | 01 00        | 00 36 | 12 00        |
|                  |                | PICTURE MODE          | BE EF  | 03 | 06 00 | 0A 3E | 01 00        | 00 36 | 13 00        |
|                  |                | FILTER RESET          | BE EF  | 03 | 06 00 | 3A 3C | 01 00        | 00 36 | 14 00        |
|                  |                | e-SHOT                | BE EF  | 03 | 06 00 | 5A 3D | 01 00        | 00 36 | 16 00        |
|                  |                | VOLUME +              | BE EF  | 03 | 06 00 | CA 3C | 01 00        | 00 36 | 17 00        |
|                  |                | VOLUME -              | BE EF  | 03 | 06 00 | 3A 39 | 01 00        | 00 36 | 18 00        |
|                  | Get            |                       | BE EF  | 03 | 06 00 | 09 33 | 02 00        | 00 36 | 00 00        |
| MY BUTTON-2      |                | COMPUTER1             | BE EF  | 03 | 06 00 | C6 32 | 01 00        | 01 36 | 00 00        |
|                  |                | COMPUTER2             | BE EF  | 03 | 06 00 | 06 30 | 01 00        | 01 36 | 04 00        |
|                  |                | COMPONENT             | BE EF  | 03 | 06 00 | 96 31 | 01 00        | 01 36 | 05 00        |
|                  |                | S-VIDEO               | BE EF  | 03 | 06 00 | A6 33 | 01 00        | 01 36 | 02 00        |
|                  |                | VIDEO                 | BE EF  | 03 | 06 00 | 56 33 | 01 00        | 01 36 | 01 00        |
|                  |                | INFORMATION           | BE EF  | 03 | 06 00 | 06 3F | 01 00        | 01 36 | 10 00        |
|                  |                | AUTO KEYSTONE EXECUTE | BE EF  | 03 | 06 00 | 96 3E | 01 00        | 01 36 | 11 00        |
|                  |                | MY MEMORY             | BE EF  | 03 | 06 00 | 66 3E | 01 00        | 01 36 | 12 00        |
|                  |                | PICTURE MODE          | BE EF  | 03 | 06 00 | F6 3F | 01 00        | 01 36 | 13 00        |
|                  |                | FILTER RESET          | BE EF  | 03 | 06 00 | C6 3D | 01 00        | 01 36 | 14 00        |
|                  |                | e-SHOT                | BE EF  | 03 | 06 00 | A6 3C | 01 00        | 01 36 | 16 00        |
|                  |                | VOLUME +              | BE EF  | 03 | 06 00 | 36 3D | 01 00        | 01 36 | 17 00        |
|                  |                | VOLUME -              | BE EF  | 03 | 06 00 | C6 38 | 01 00        | 01 36 | 18 00        |
|                  | Get            |                       | BE EF  | 03 | 06 00 | F5 32 | 02 00        | 01 36 | 00 00        |
| MAGNIFY          | Get            |                       | BE EF  | 03 | 06 00 | 7C D2 | 02 00        | 07 30 | 00 00        |
|                  | Increment      |                       | BE EF  | 03 | 06 00 | 1A D2 | 04 00        | 07 30 | 00 00        |
|                  | Decrement      |                       | BE EF  | 03 | 06 00 | CB D3 | 05 00        | 07 30 | 00 00        |
| FREEZE           | Set            | NORMAL                | BE EF  | 03 | 06 00 | 83 D2 | 01 00        | 02 30 | 00 00        |
|                  |                | FREEZE                | BE EF  | 03 | 06 00 | 13 D3 | 01 00        | 02 30 | 01 00        |
|                  | Get            |                       | BE EF  | 03 | 06 00 | B0 D2 | 02 00        | 02 30 | 00 00        |

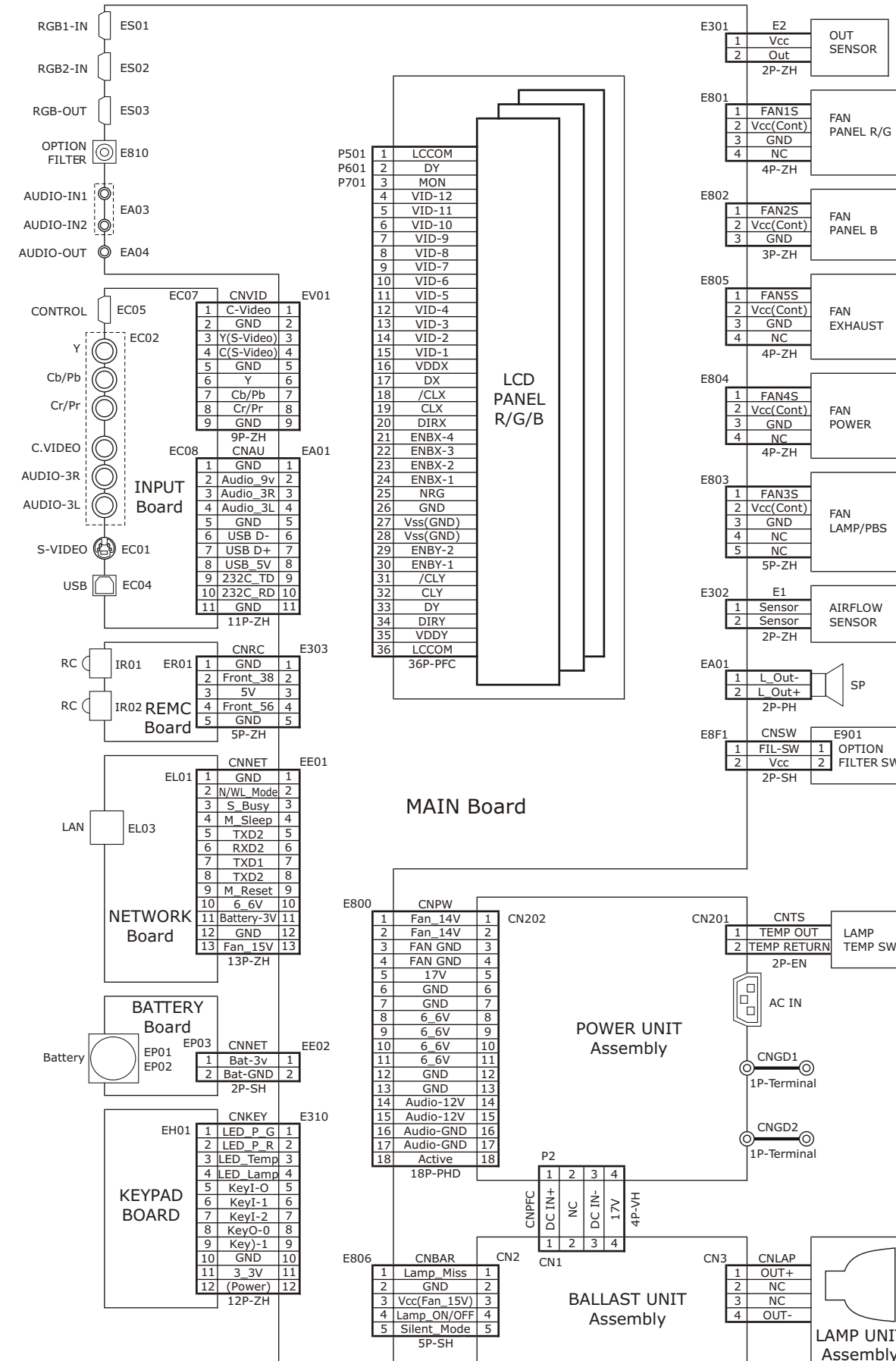
**CP-X205W (C14-20N) / CP-X305W (C14-25N)**

| Names                | Operation Type | Header |       |    |       | Command Data |        |       |              |
|----------------------|----------------|--------|-------|----|-------|--------------|--------|-------|--------------|
|                      |                |        |       |    |       | CRC          | Action | Type  | Setting Code |
| e-SHOT               | Set            | OFF    | BE EF | 03 | 06 00 | 3A C3        | 01 00  | 00 35 | 00 00        |
|                      |                | IMAGE1 | BE EF | 03 | 06 00 | AA C2        | 01 00  | 00 35 | 01 00        |
|                      |                | IMAGE2 | BE EF | 03 | 06 00 | 5A C2        | 01 00  | 00 35 | 02 00        |
|                      |                | IMAGE3 | BE EF | 03 | 06 00 | CA C3        | 01 00  | 00 35 | 03 00        |
|                      |                | IMAGE4 | BE EF | 03 | 06 00 | FA C1        | 01 00  | 00 35 | 04 00        |
|                      | Get            |        | BE EF | 03 | 06 00 | 09 C3        | 02 00  | 00 35 | 00 00        |
| e-SHOT IMAGE1 Delete | Execute        |        | BE EF | 03 | 06 00 | 71 C3        | 06 00  | 01 35 | 00 00        |
| e-SHOT IMAGE2 Delete | Execute        |        | BE EF | 03 | 06 00 | 35 C3        | 06 00  | 02 35 | 00 00        |
| e-SHOT IMAGE3 Delete | Execute        |        | BE EF | 03 | 06 00 | C9 C2        | 06 00  | 03 35 | 00 00        |
| e-SHOT IMAGE4 Delete | Execute        |        | BE EF | 03 | 06 00 | BD C3        | 06 00  | 04 35 | 00 00        |

## 11. Block diagram



## 12. Connector diagram

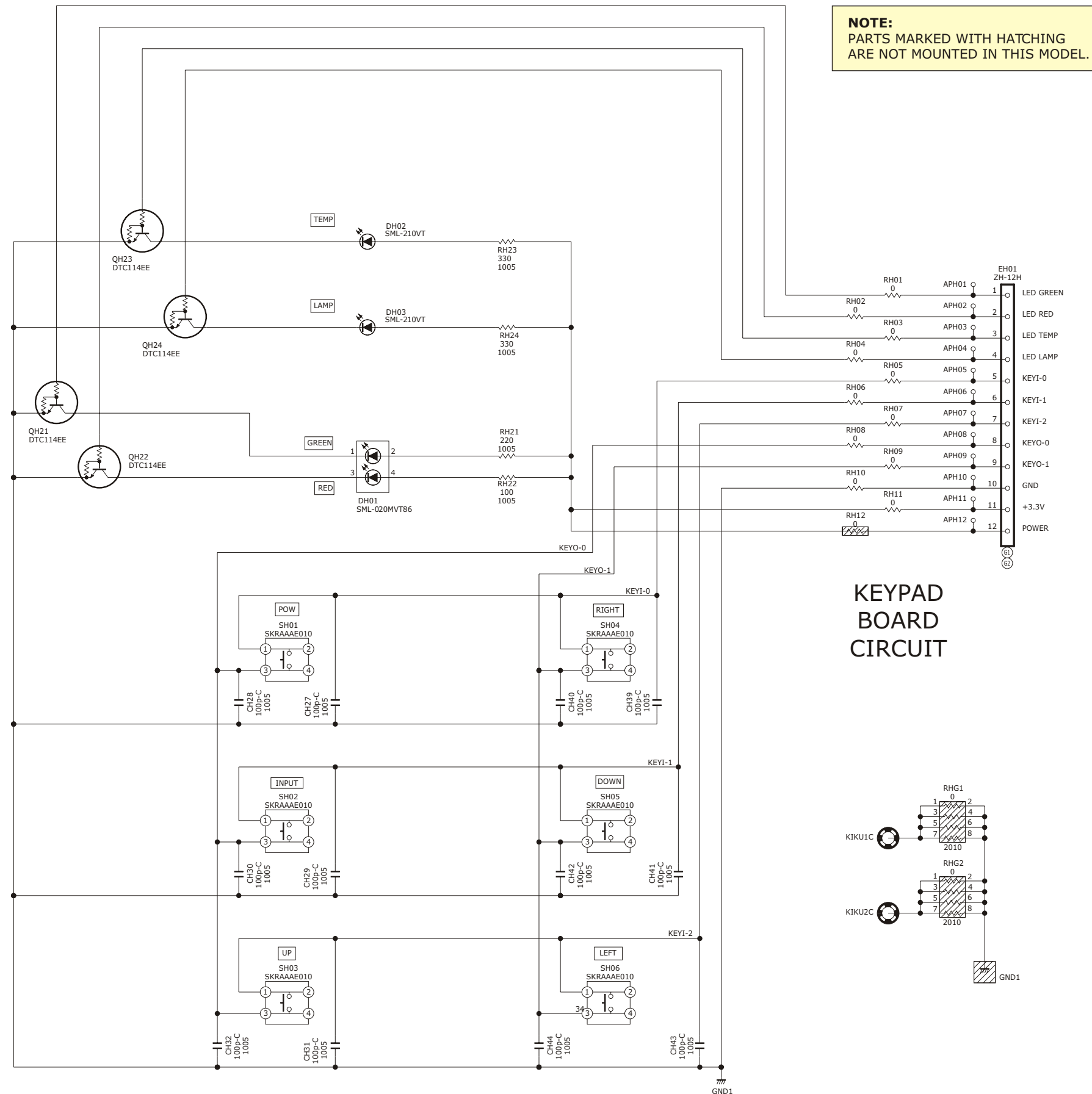
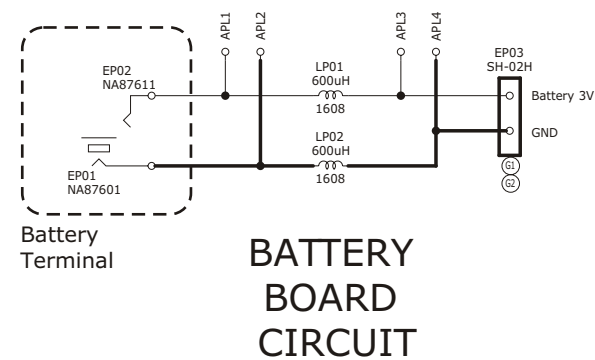
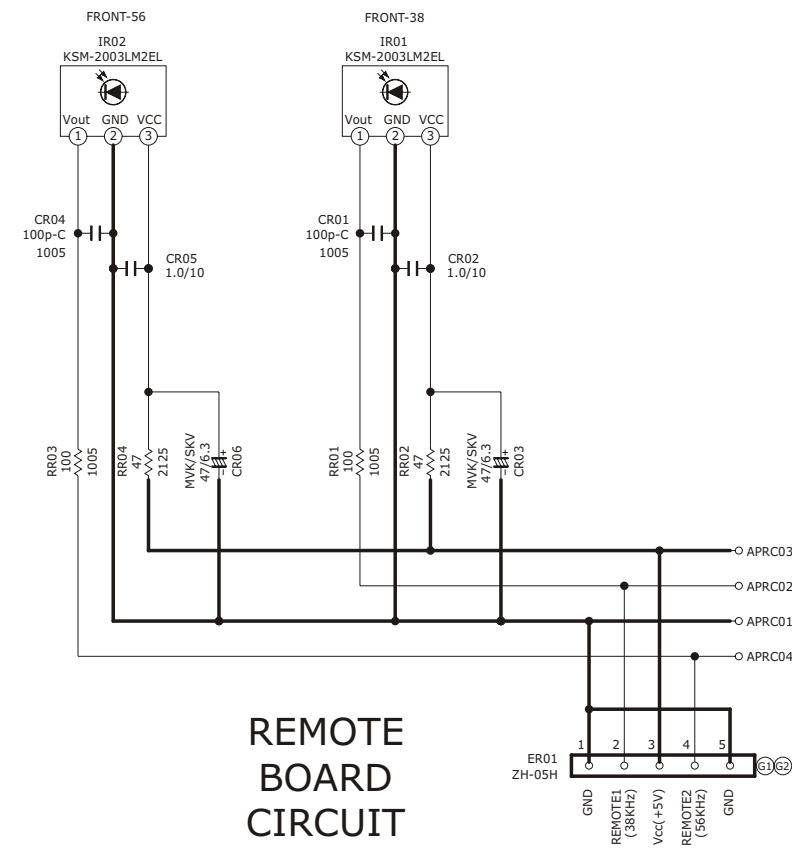


### 13. Schematic diagrams

#### Schematic diagram list

|                       |                         |
|-----------------------|-------------------------|
| REMOTE Board Circuit  | MAIN Board Circuit 6    |
| KEYPAD Board Circuit  | MAIN Board Circuit 7    |
| BATTERY Board Circuit | MAIN Board Circuit 8    |
| POWER UNIT BALLAST 1  | MAIN Board Circuit 9    |
| POWER UNIT BALLAST 2  | MAIN Board Circuit 10   |
| POWER UNIT CIRCUIT    | MAIN Board Circuit 11   |
| INPUT Board Circuit   | MAIN Board Circuit 12   |
| MAIN Board Circuit 1  | NETWORK Board Circuit 1 |
| MAIN Board Circuit 2  | NETWORK Board Circuit 2 |
| MAIN Board Circuit 3  | NETWORK Board Circuit 3 |
| MAIN Board Circuit 4  | NETWORK Board Circuit 4 |
| MAIN Board Circuit 5  |                         |

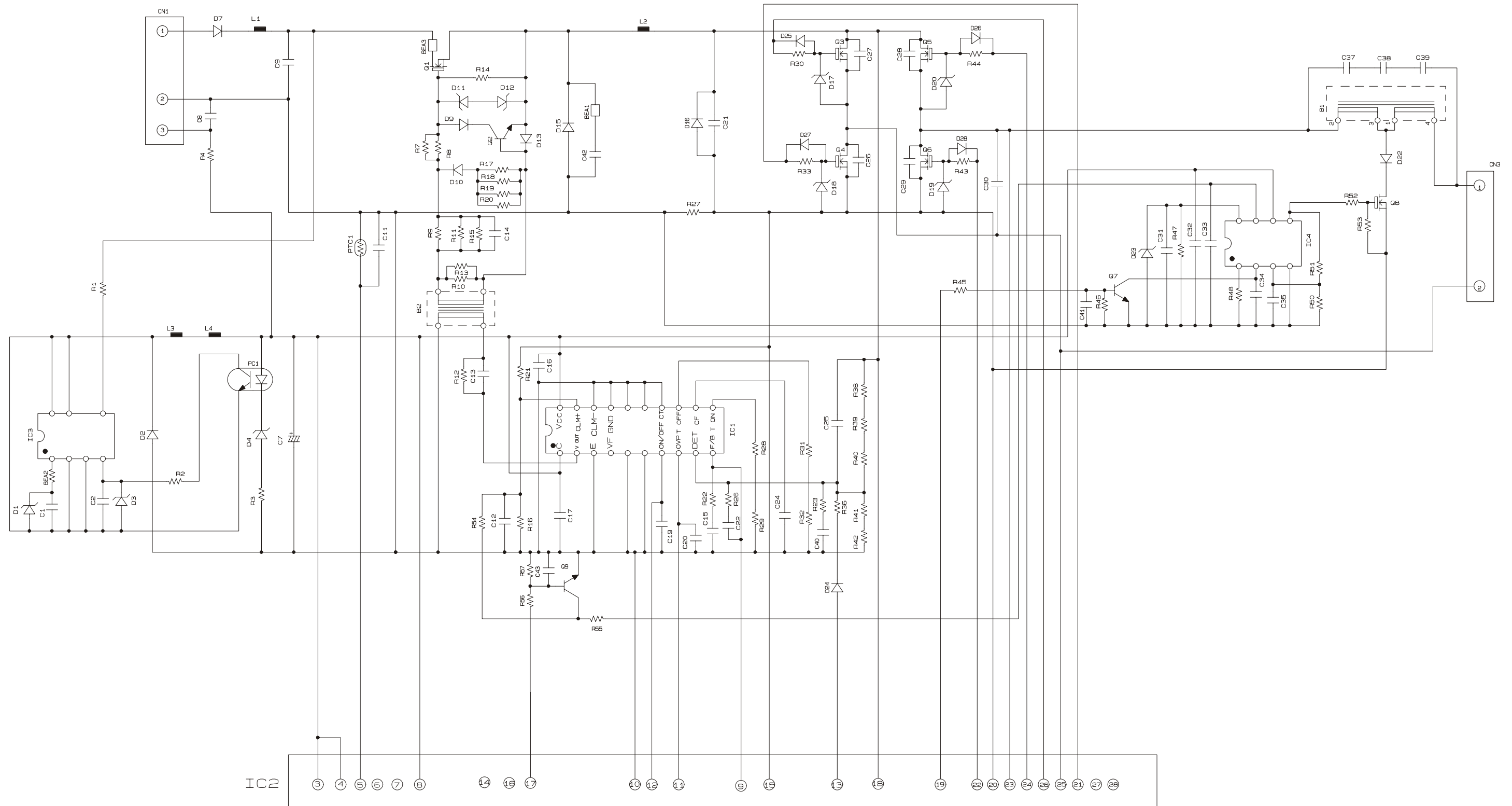
## 13. Schematic diagrams

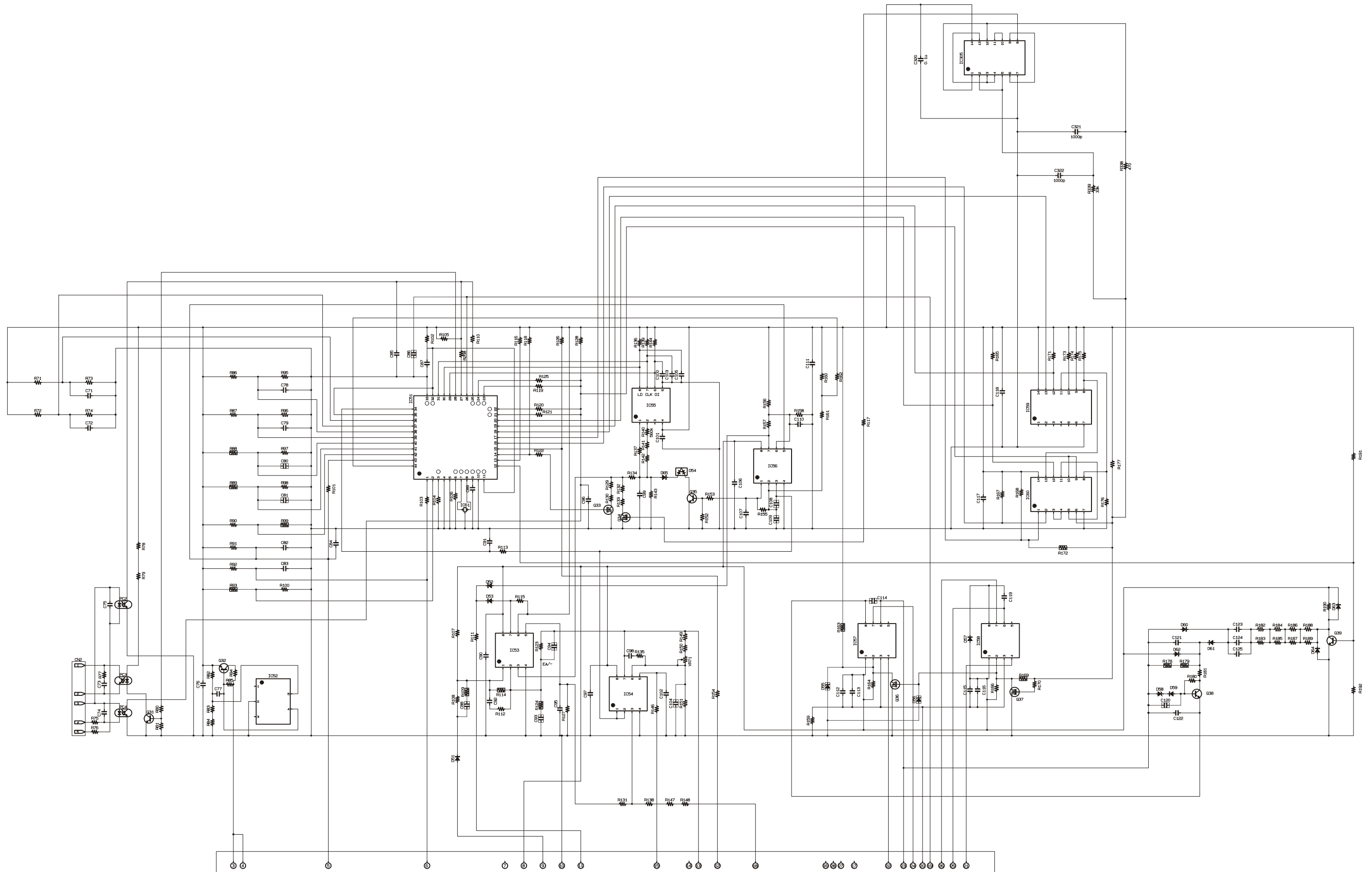


SM0591

REMOTE, KEYPAD AND BATTERY BOARD CIRCUITS

HITACHI

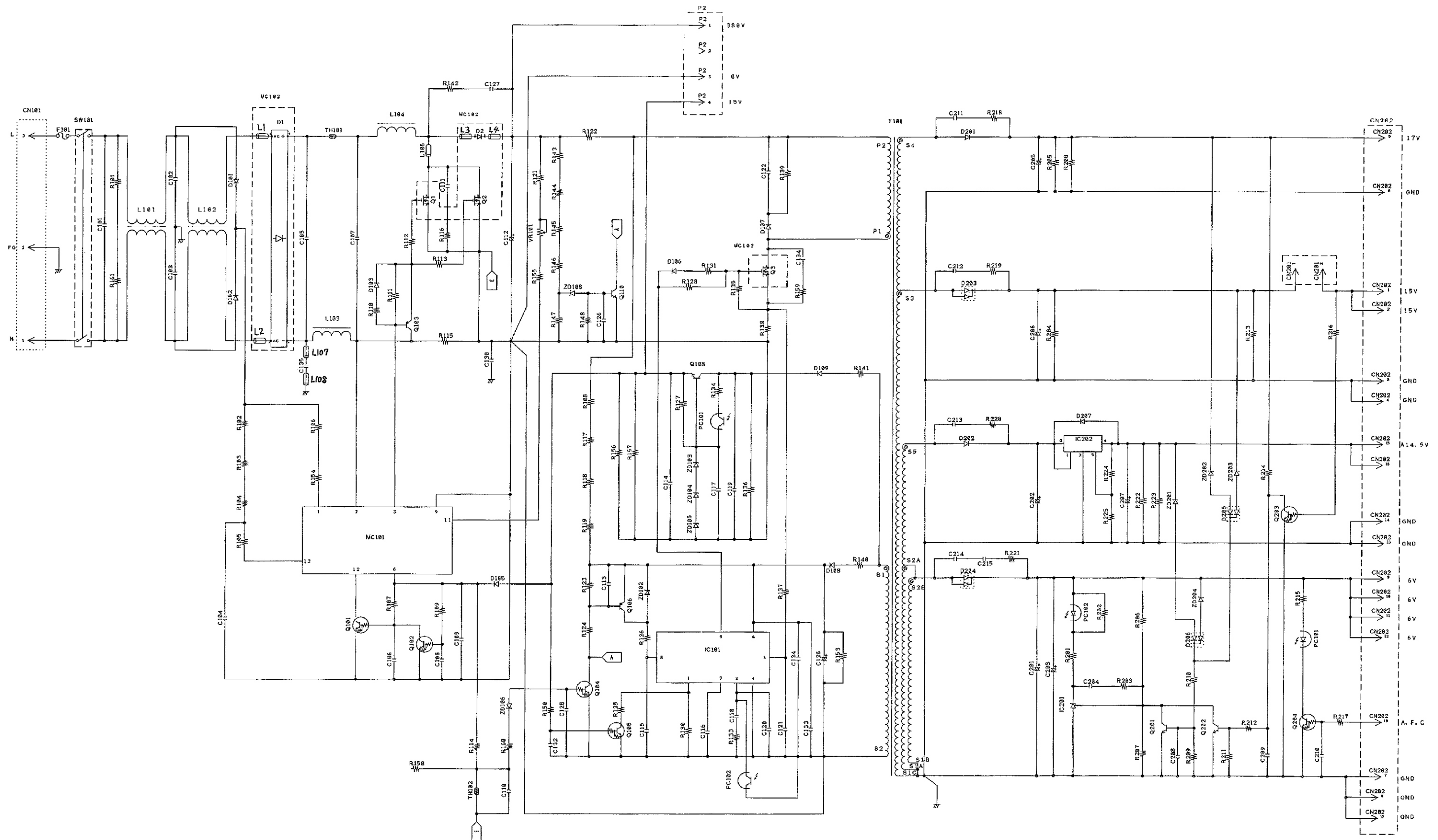




SM0591

POWER UNIT (BALLAST) - SHEET 2

HITACHI

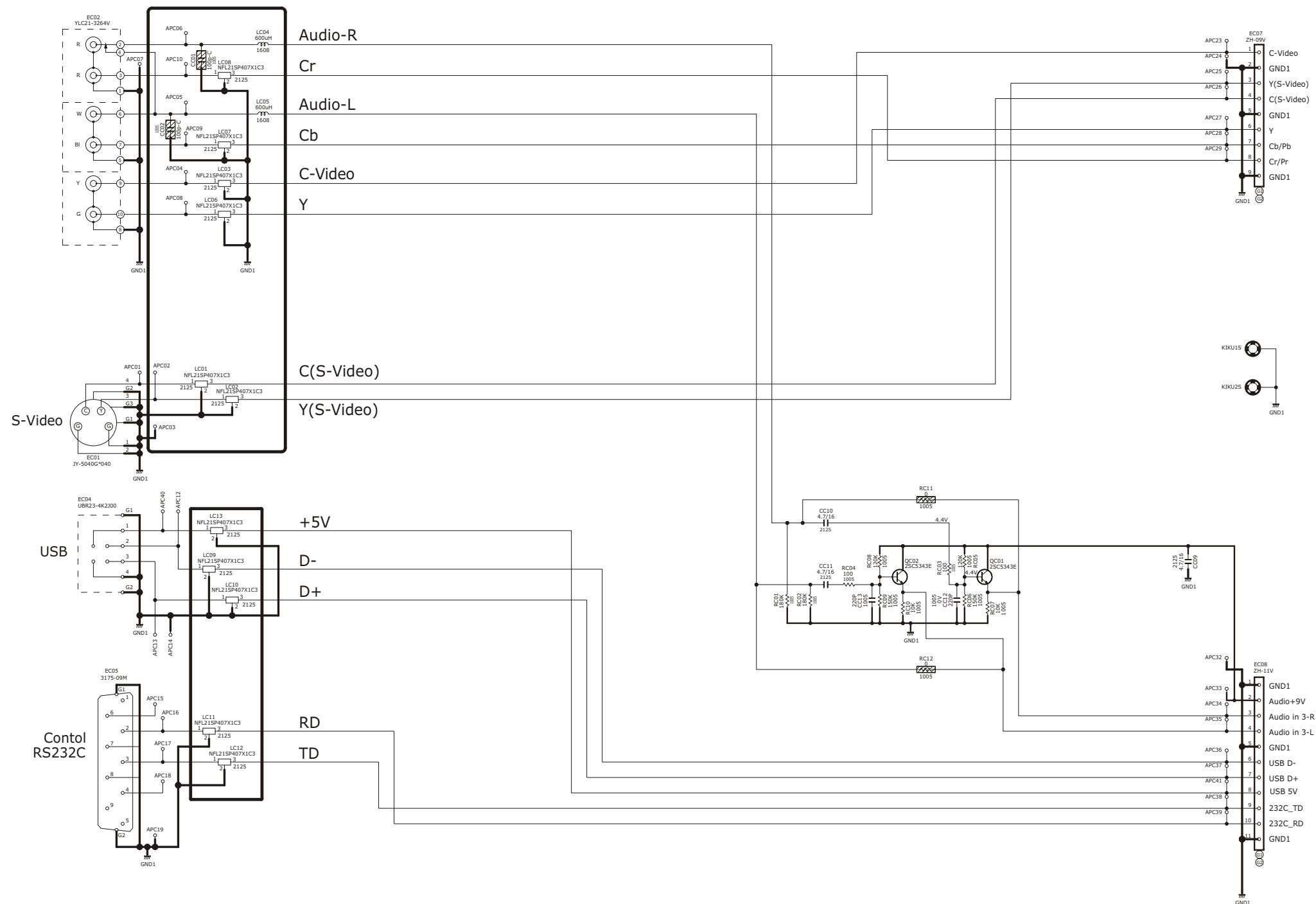


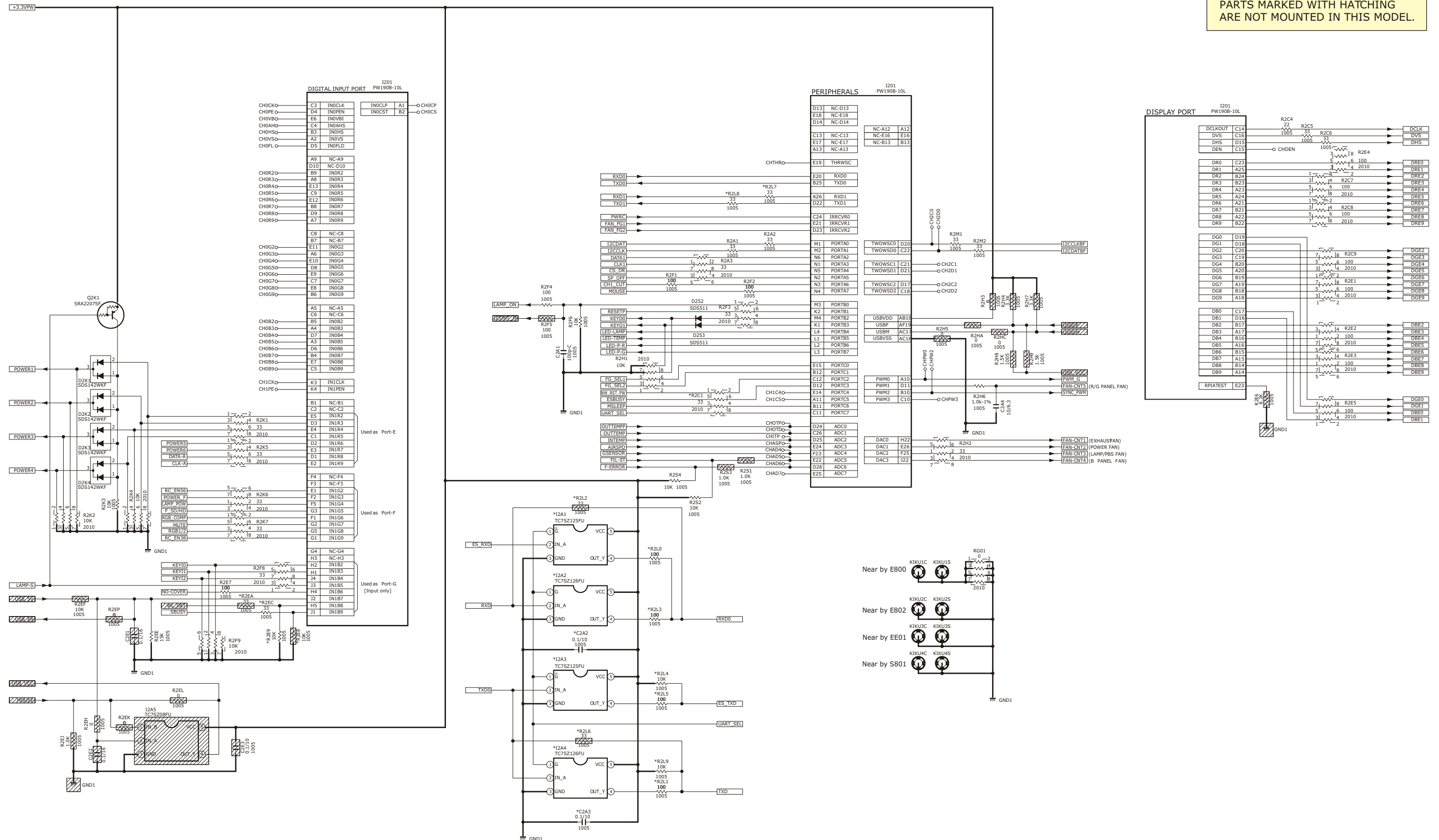
SM0591

POWER UNIT (CIRCUIT)

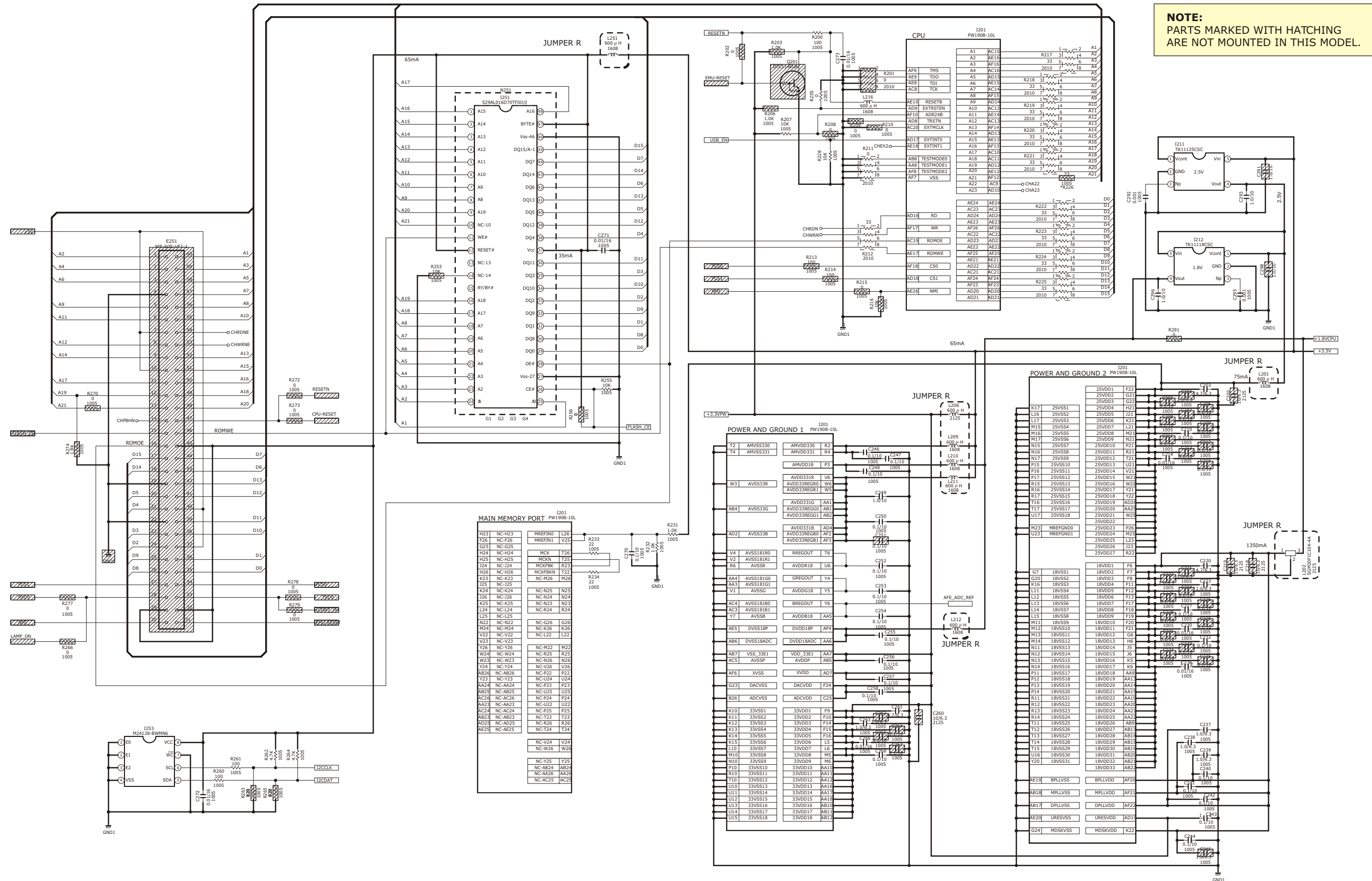
HITACHI

**NOTE:**  
PARTS MARKED WITH HATCHING  
ARE NOT MOUNTED IN THIS MODEL.





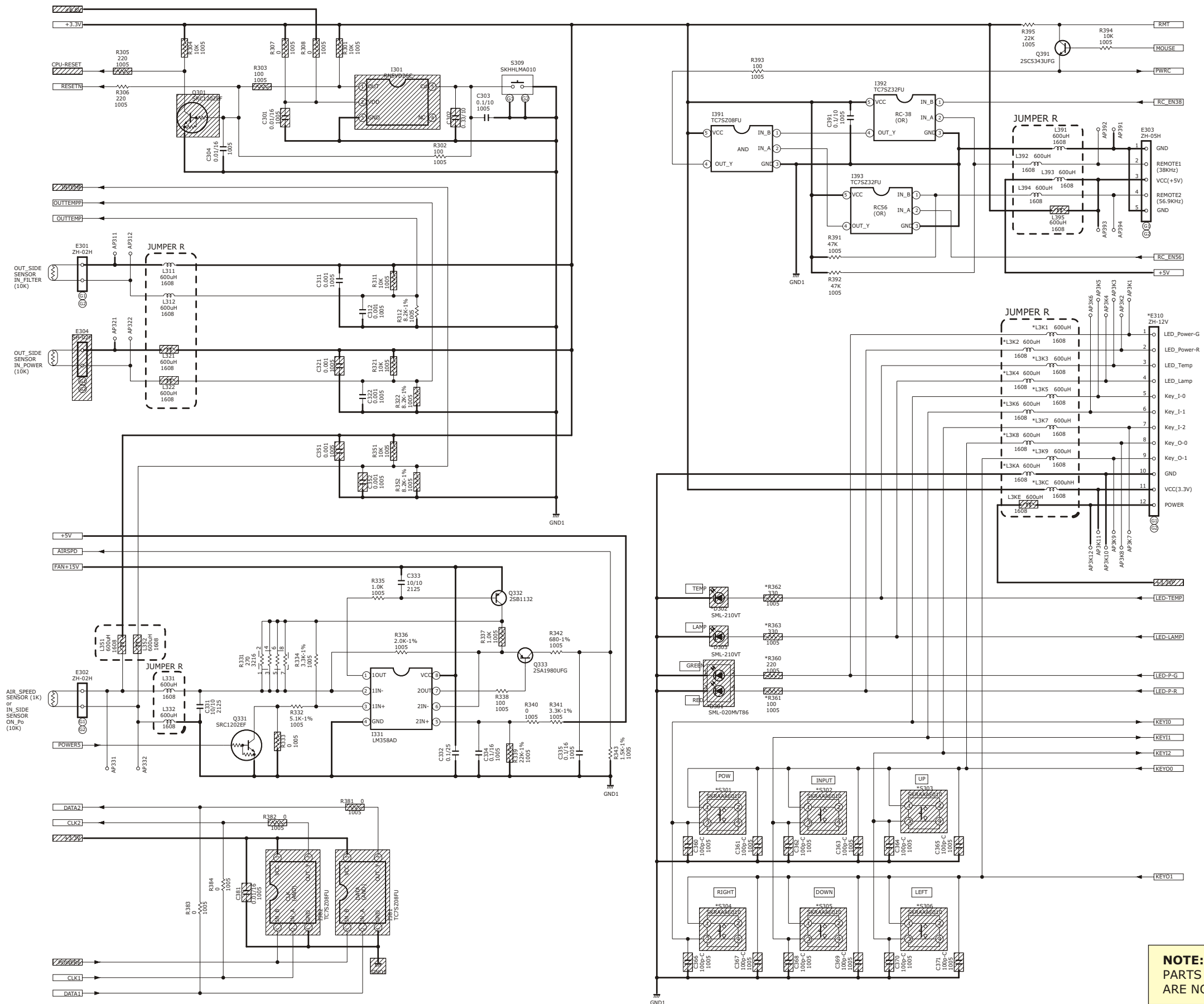
**CP-X205W (C14-20N) / CP-X305W (C14-25N)**



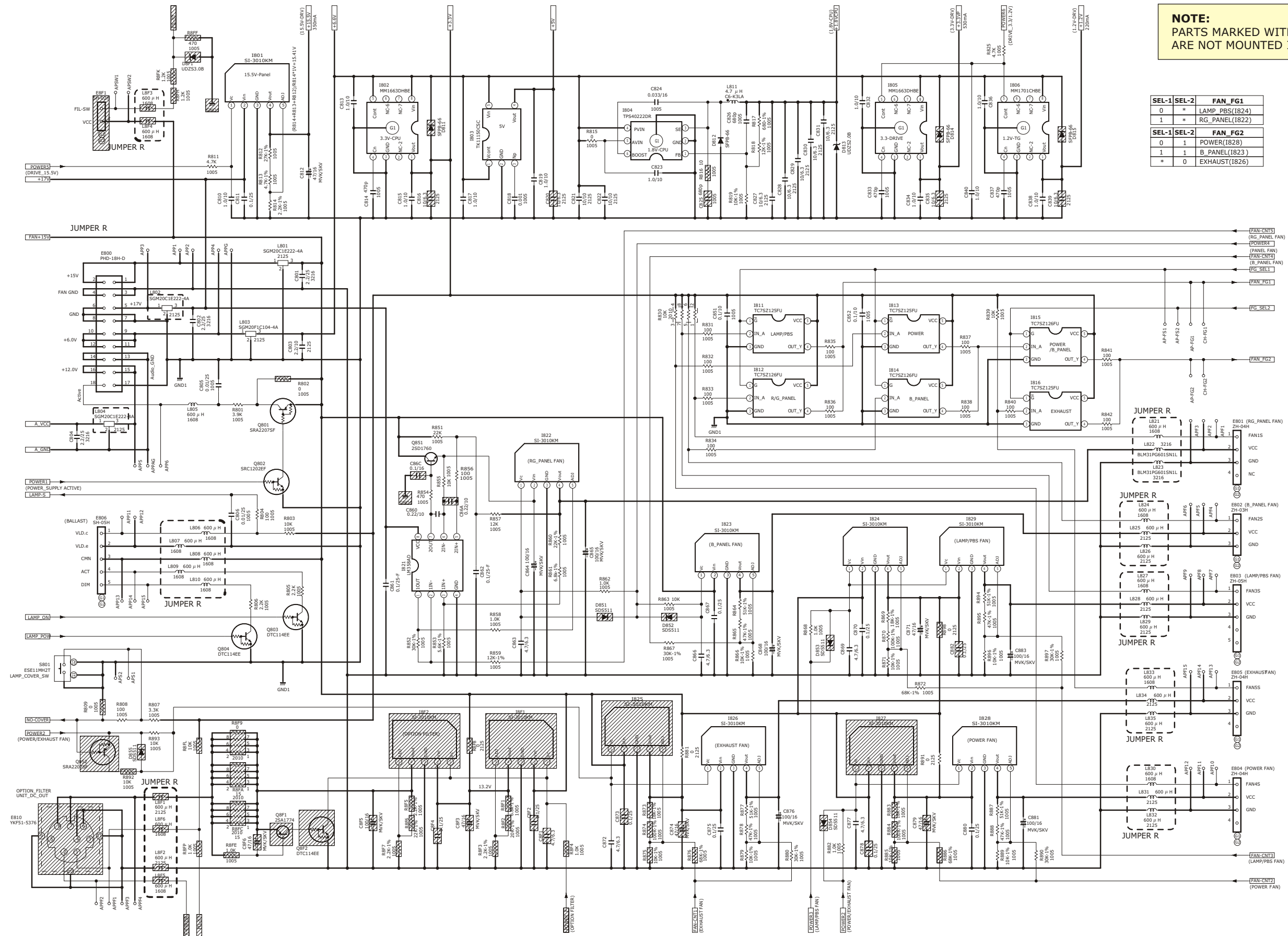
SM0591

# MAIN BOARD CIRCUIT - SHEET 2

# HITACHI



**NOTE:**  
PARTS MARKED WITH HATCHING  
ARE NOT MOUNTED IN THIS MODEL.



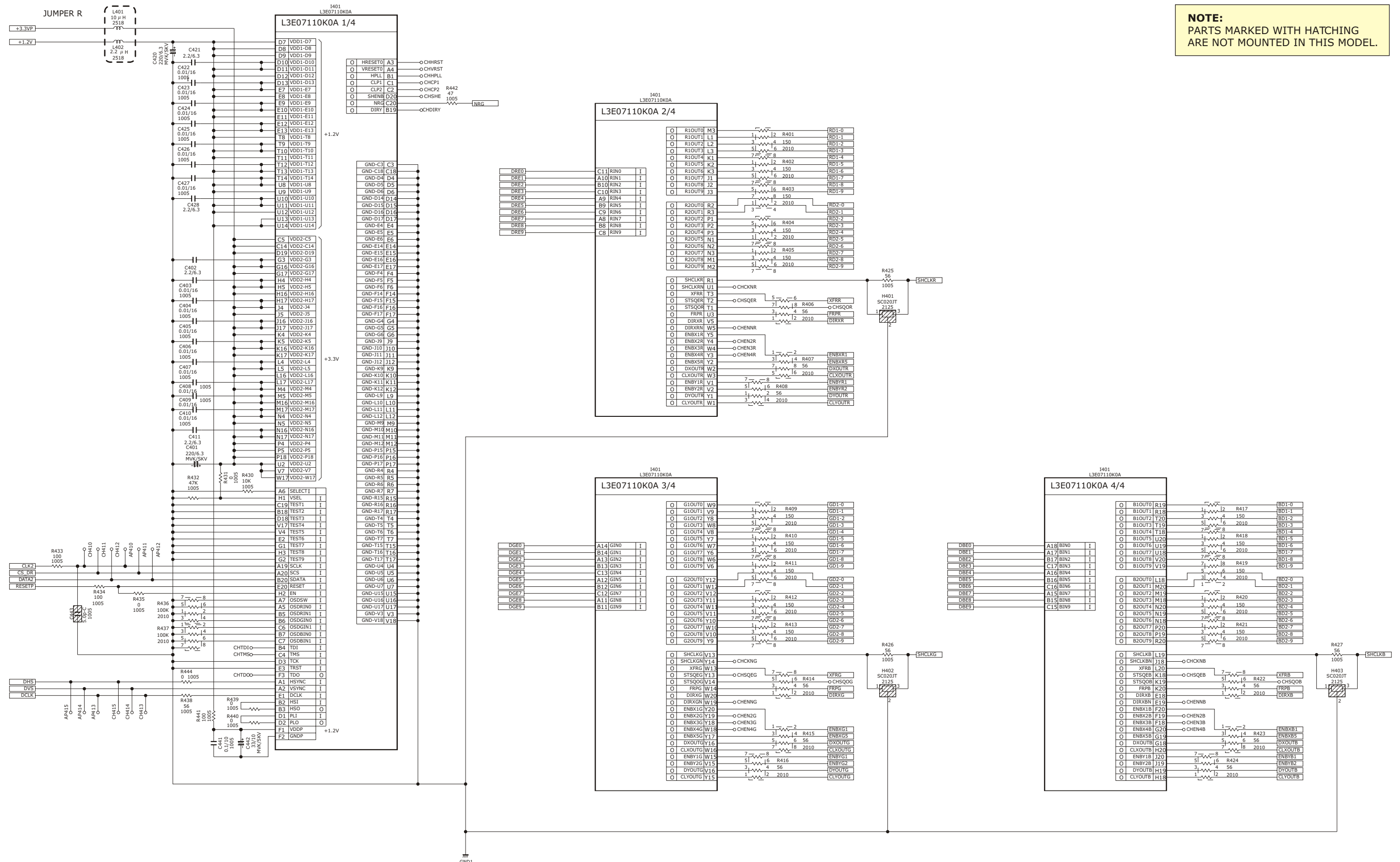
**NOTE:**  
PARTS MARKED WITH HATCHING  
ARE NOT MOUNTED IN THIS MODEL.

| SEL-1 | SEL-2 | FAN_FG1        |
|-------|-------|----------------|
| 0     | *     | LAMP_PBS(1824) |
| 1     | *     | RG_PANEL(1822) |

| SEL-1 | SEL-2 | FAN_FG2       |
|-------|-------|---------------|
| 0     | 1     | POWER(1828)   |
| 1     | 1     | B_PANEL(1823) |
| *     | 0     | EXHAUST(1826) |

**CP-X205W (C14-20N) / CP-X305W (C14-25N)**



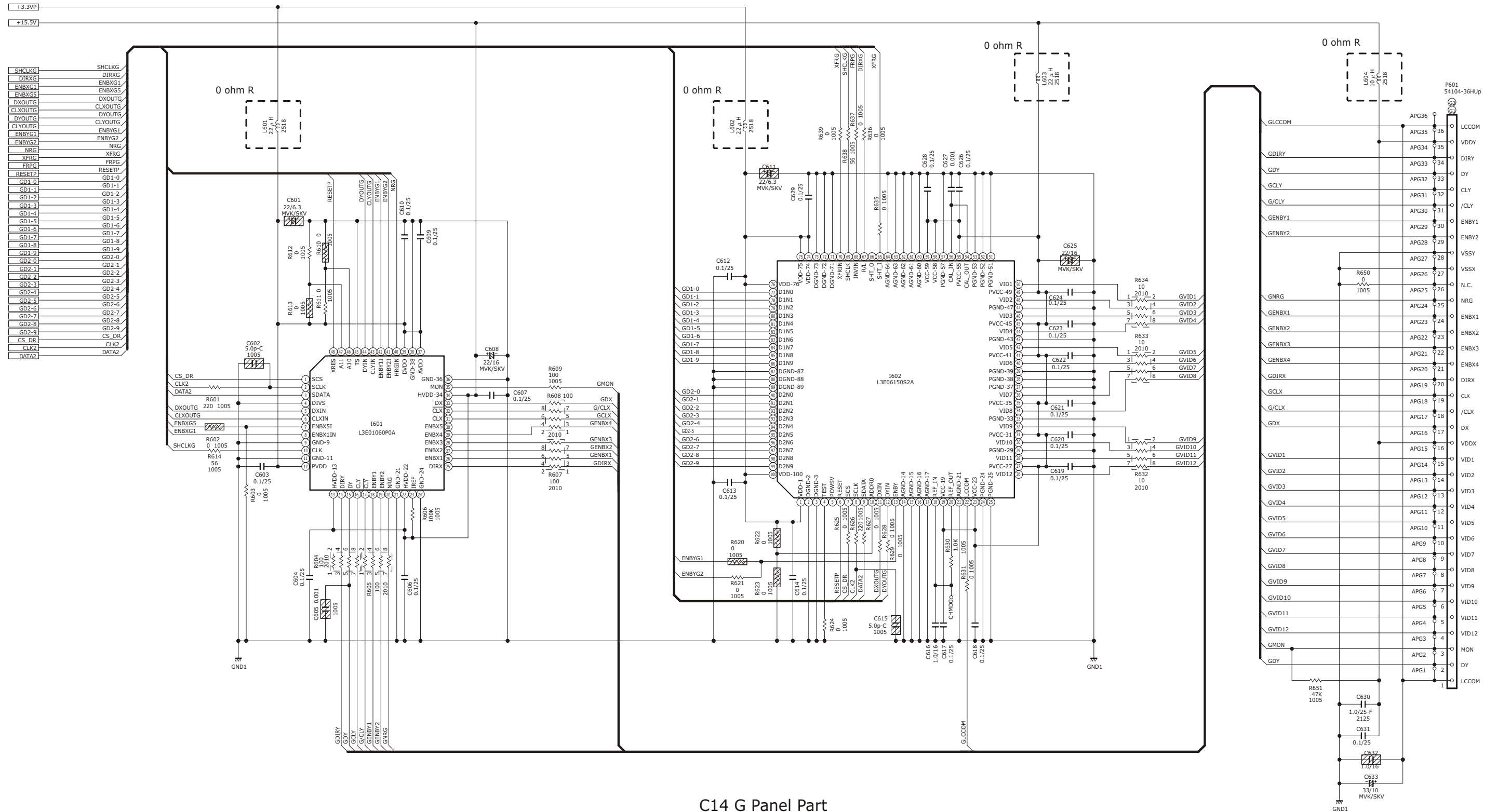
SM0591

# MAIN BOARD CIRCUIT - SHEET 5

# HITACHI

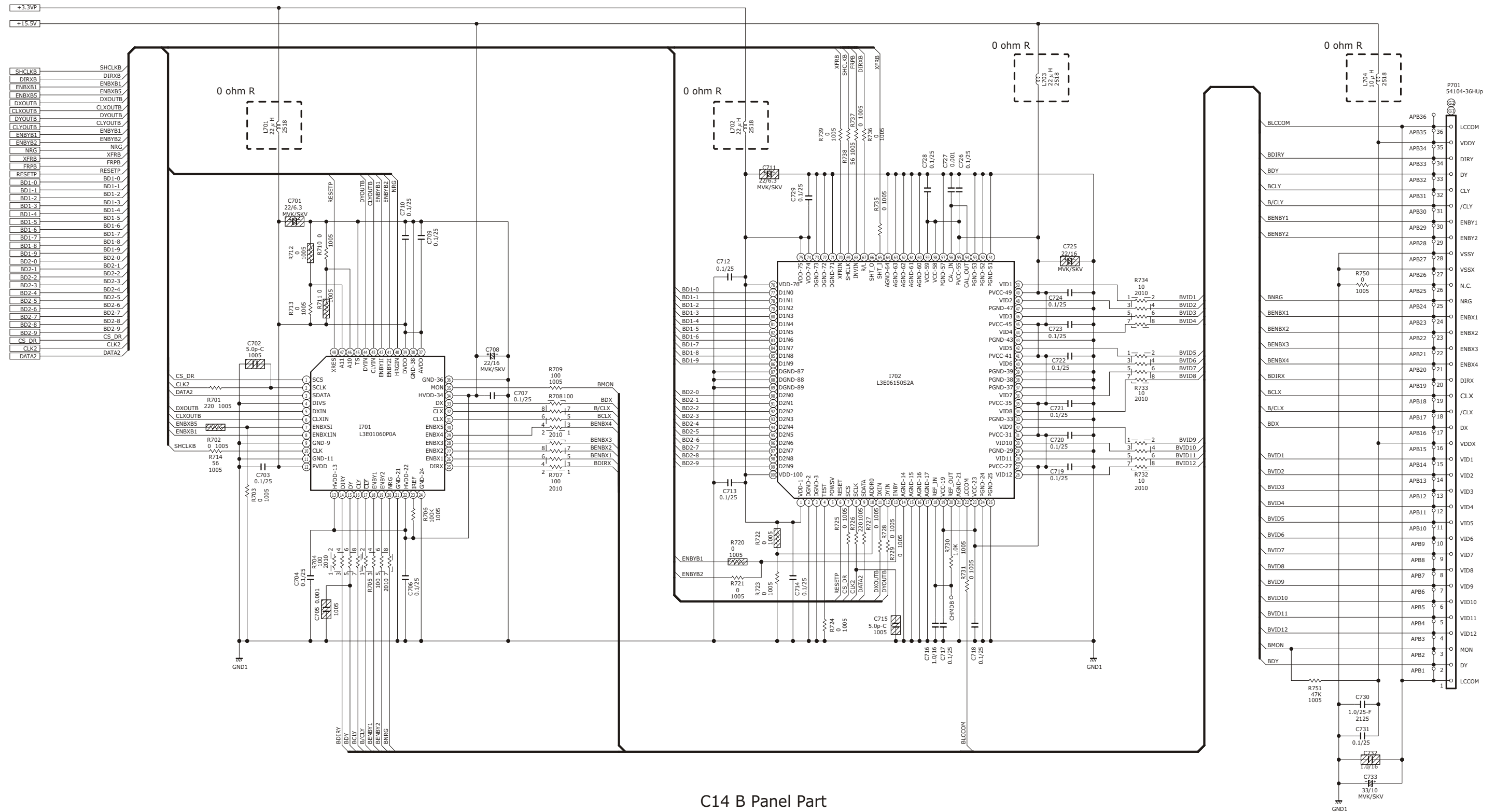


**NOTE:**  
PARTS MARKED WITH HATCHING  
ARE NOT MOUNTED IN THIS MODEL.

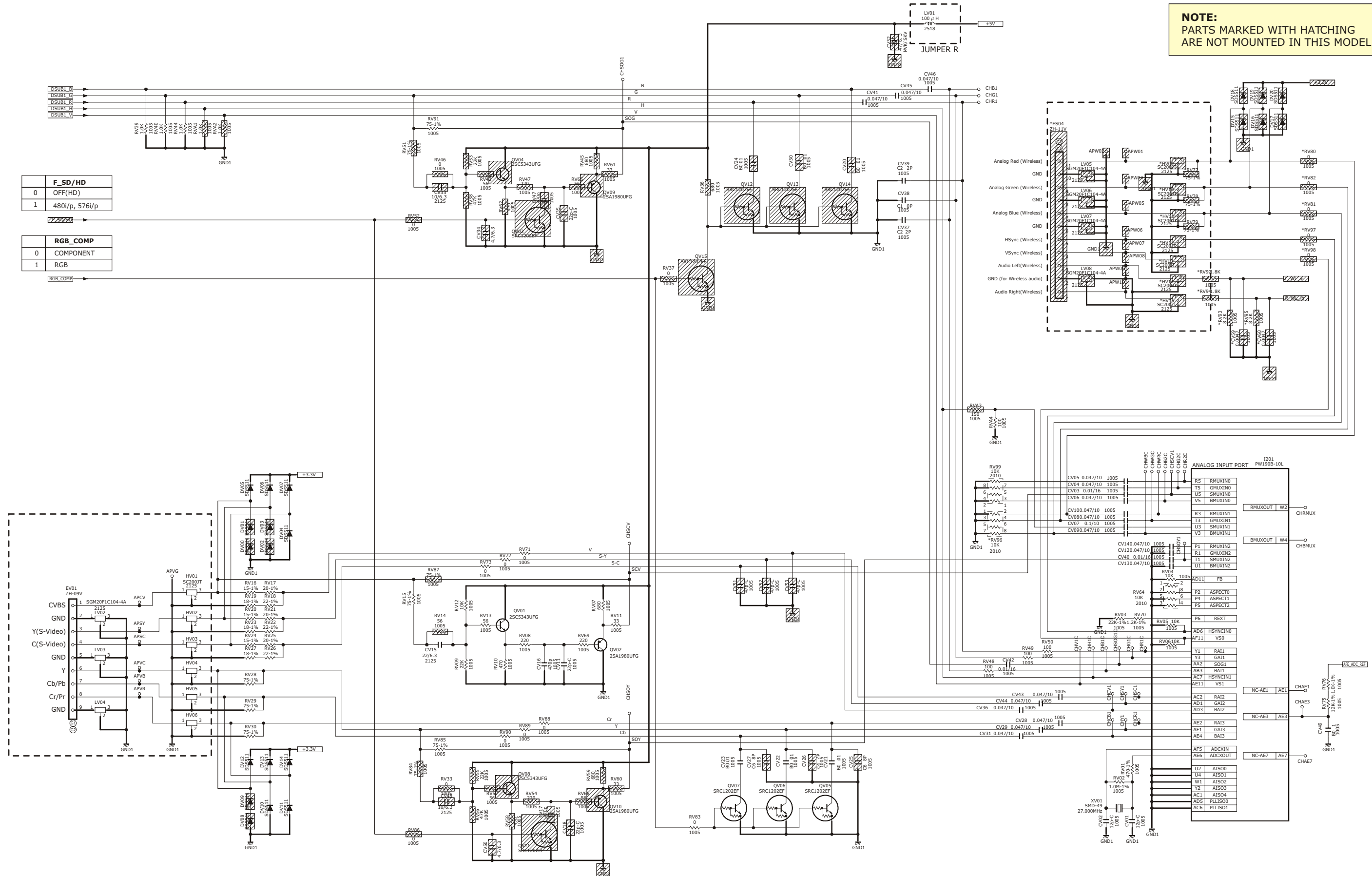


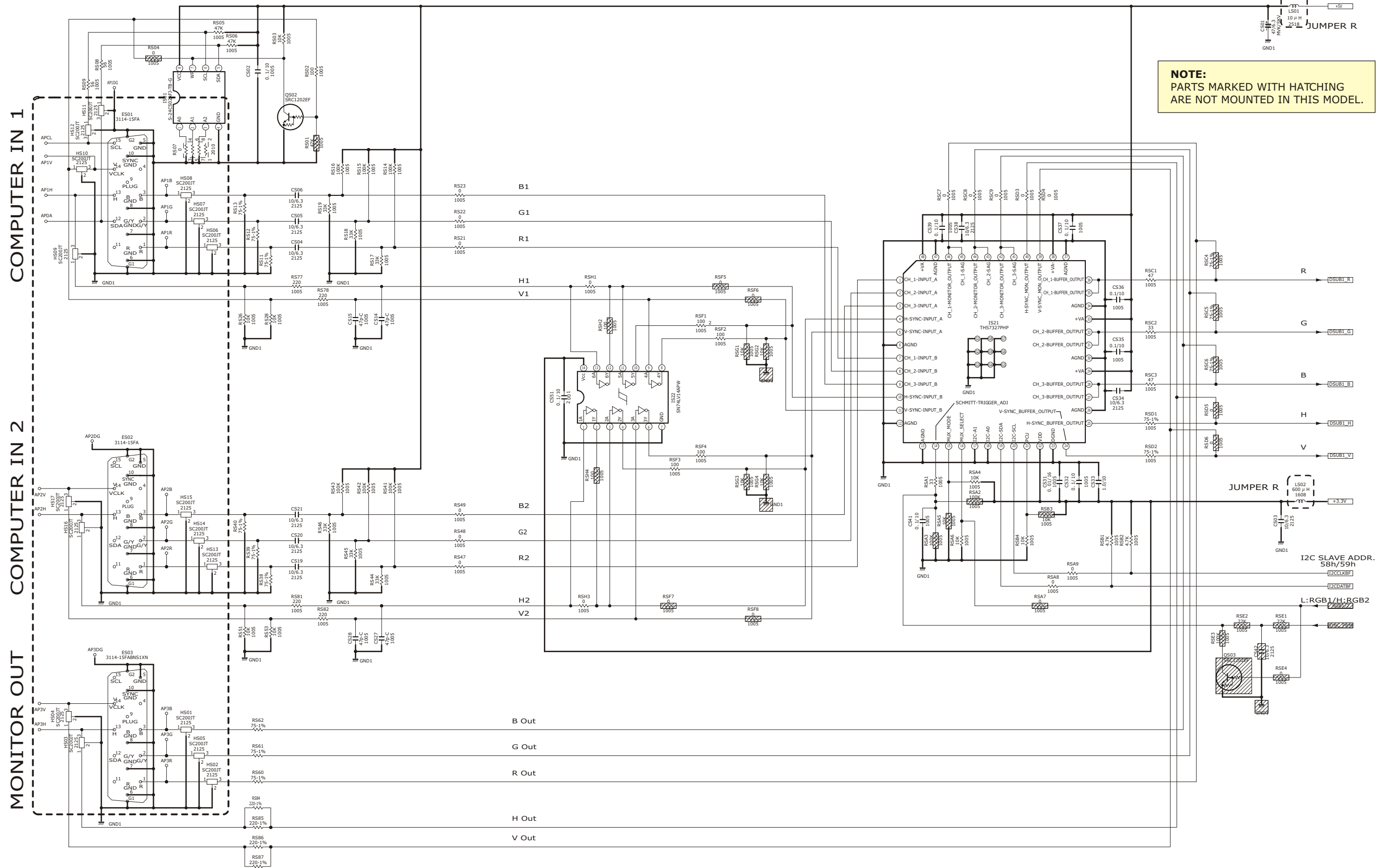
C14 G Panel Part

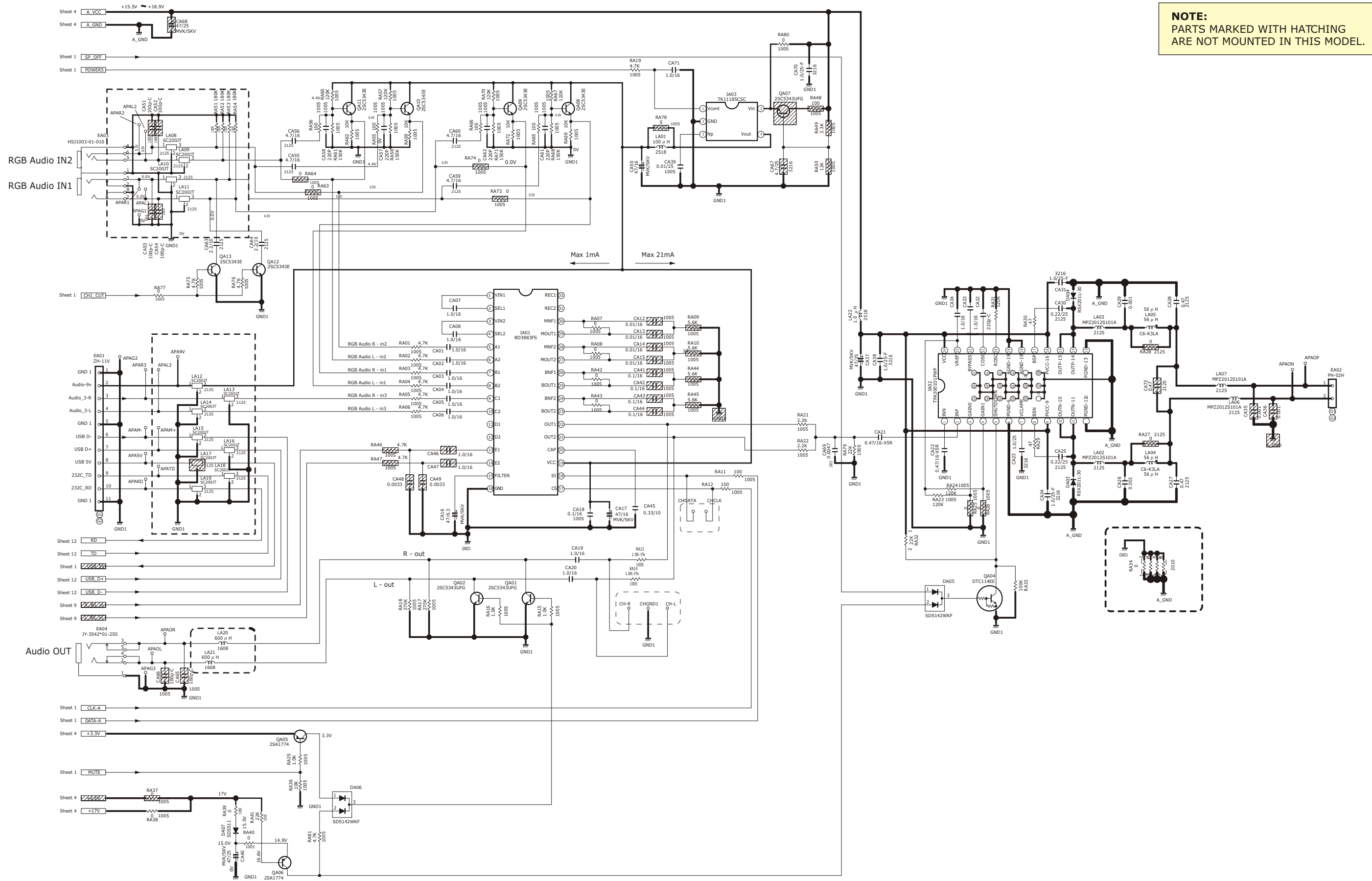
**NOTE:**  
PARTS MARKED WITH HATCHING  
ARE NOT MOUNTED IN THIS MODEL.



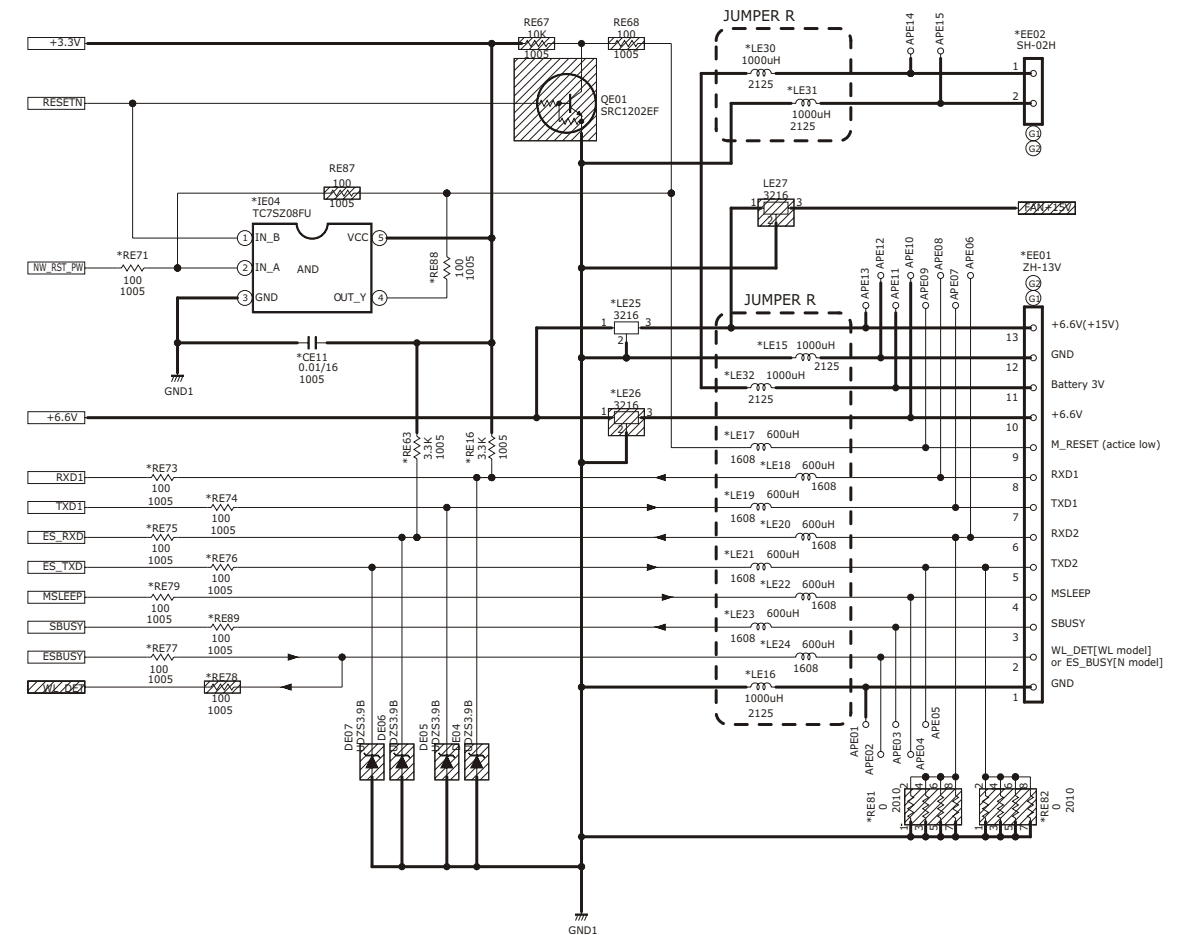
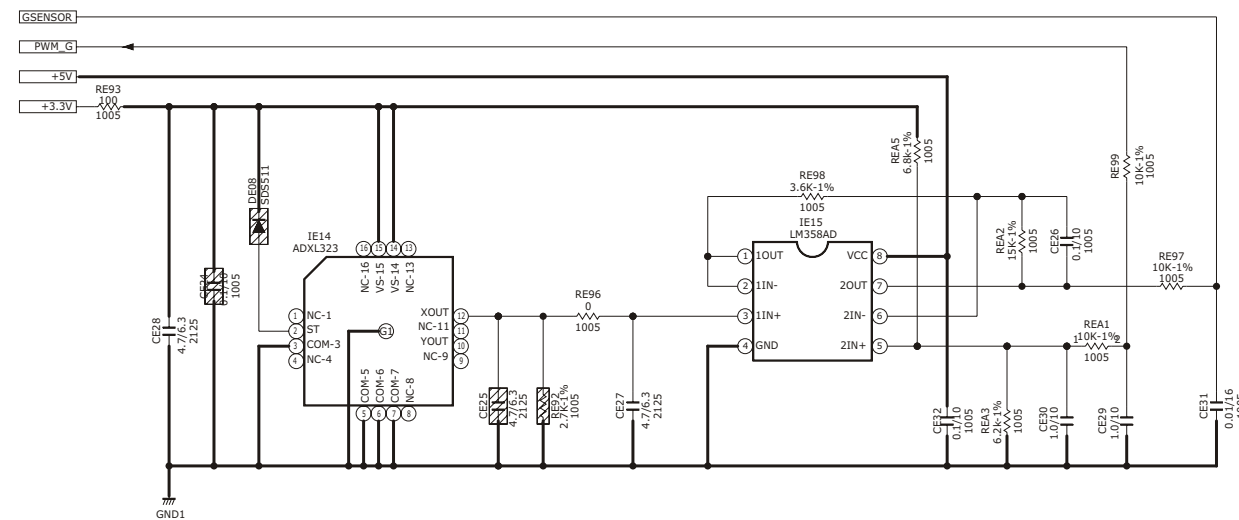
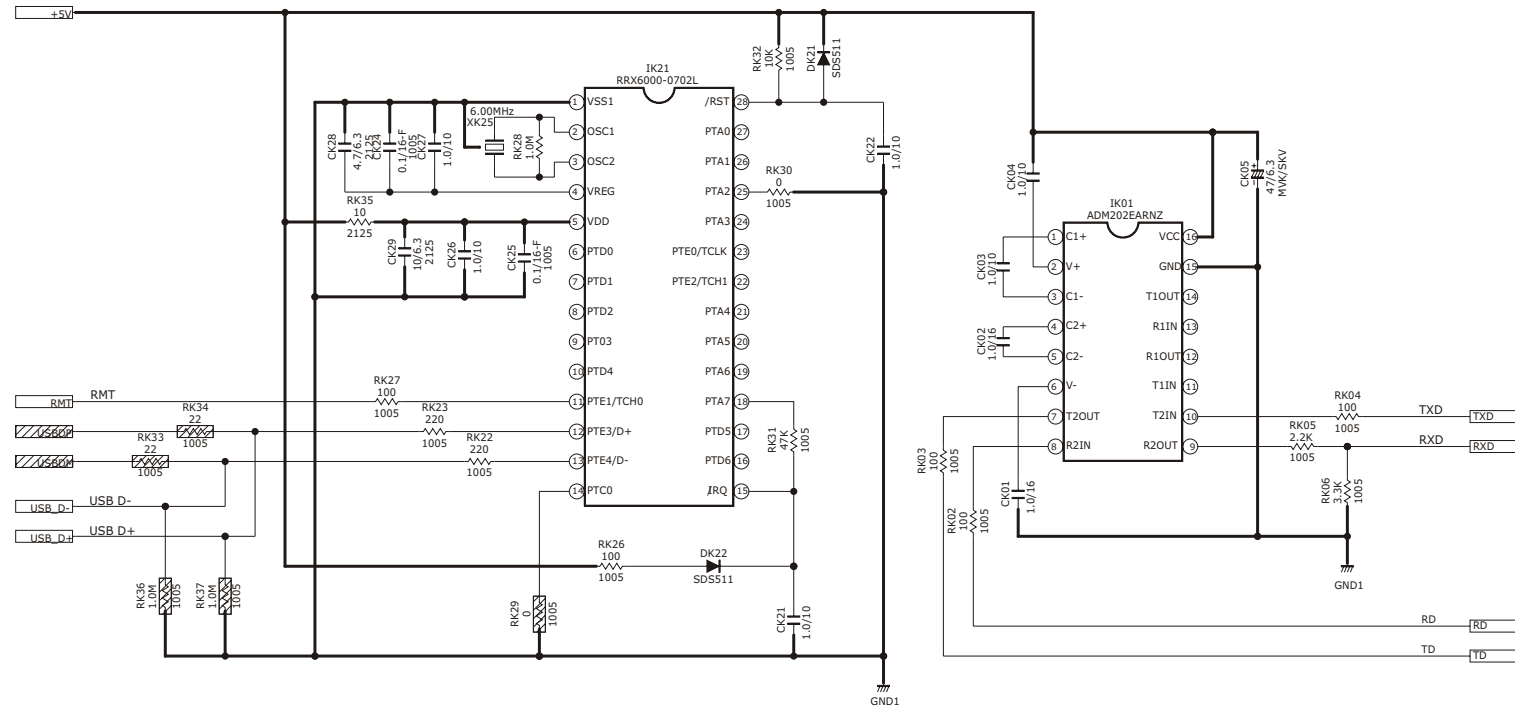
**NOTE:**  
PARTS MARKED WITH HATCHING  
ARE NOT MOUNTED IN THIS MODEL.



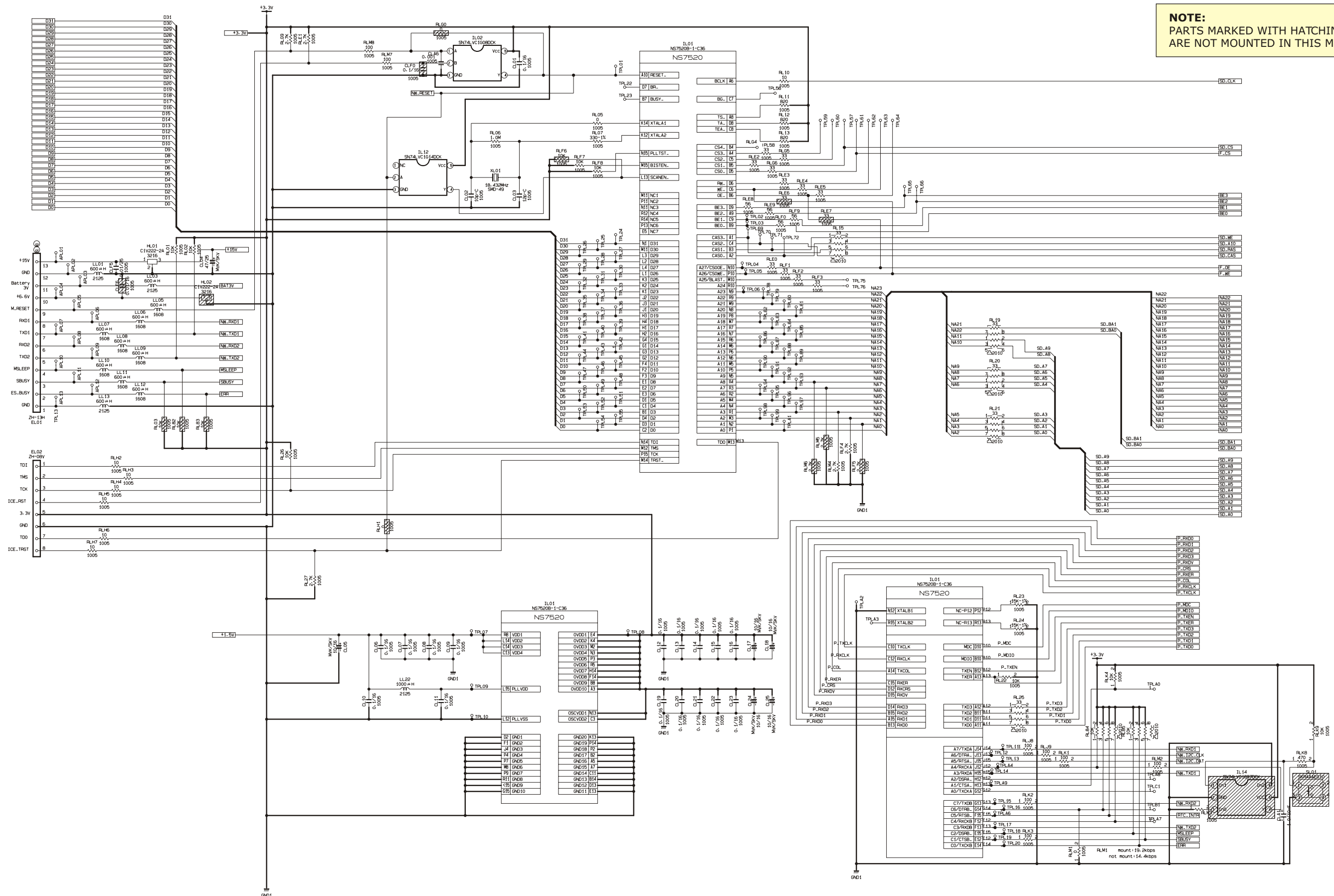


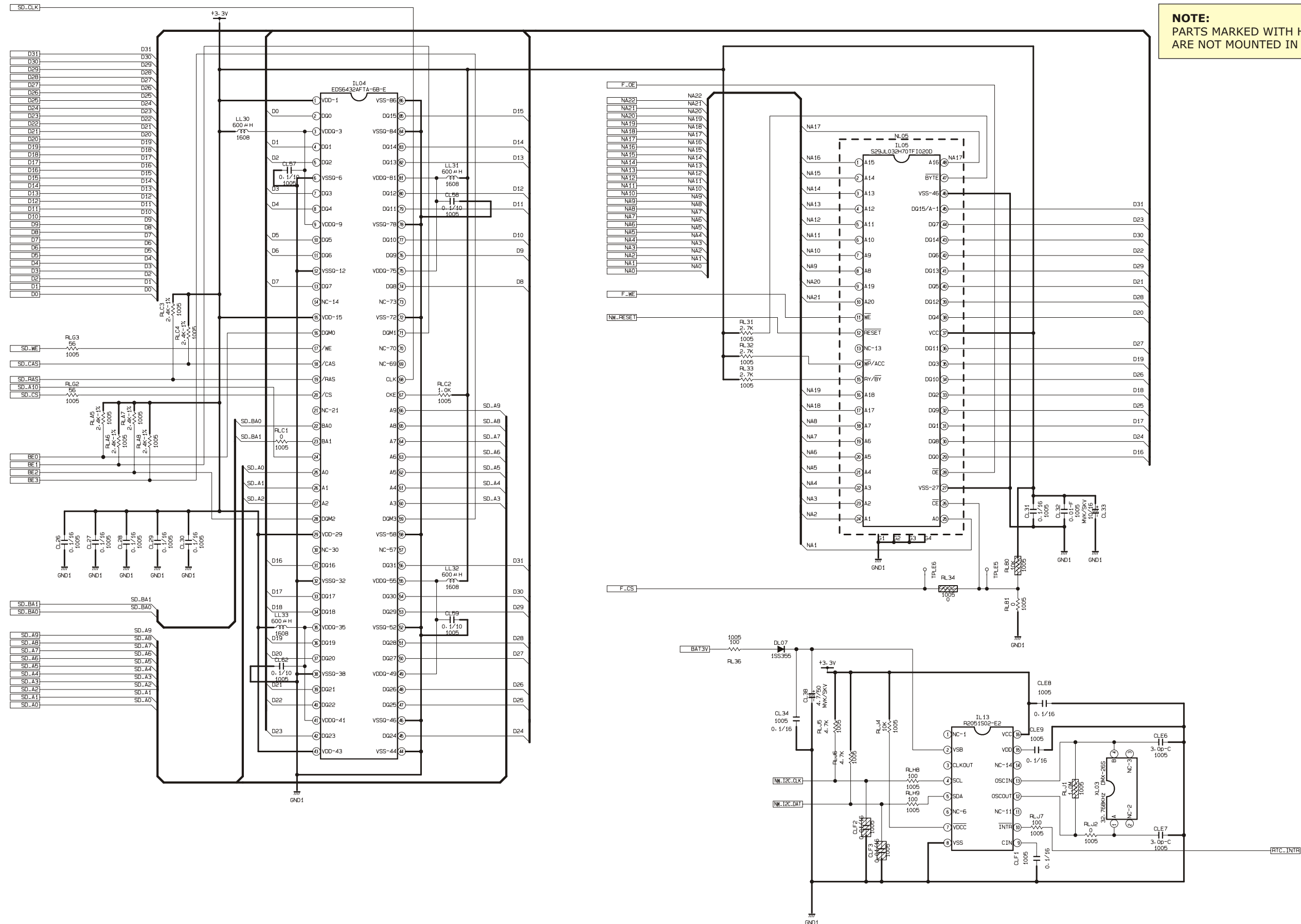


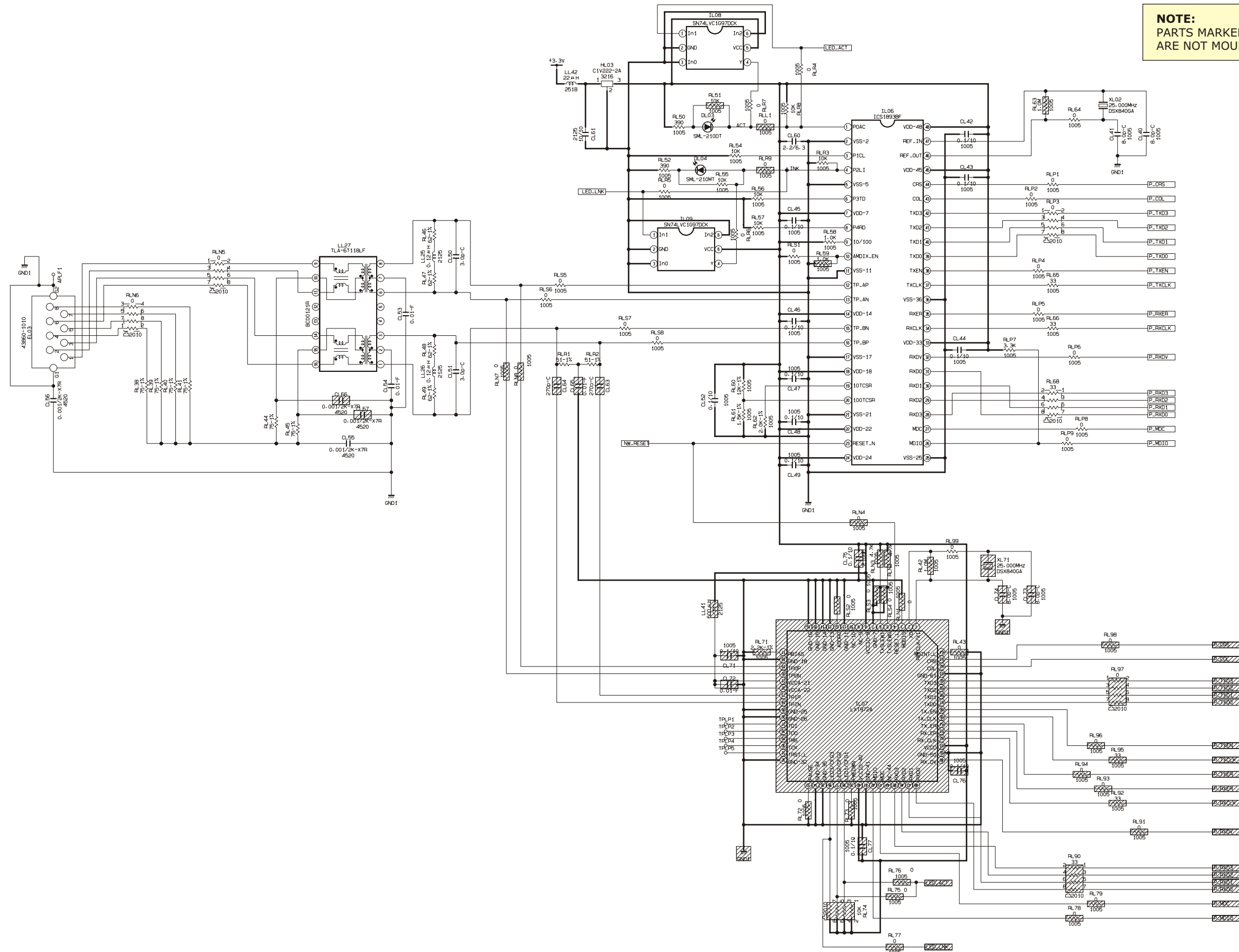
**NOTE:**  
PARTS MARKED WITH HATCHING  
ARE NOT MOUNTED IN THIS MODEL.



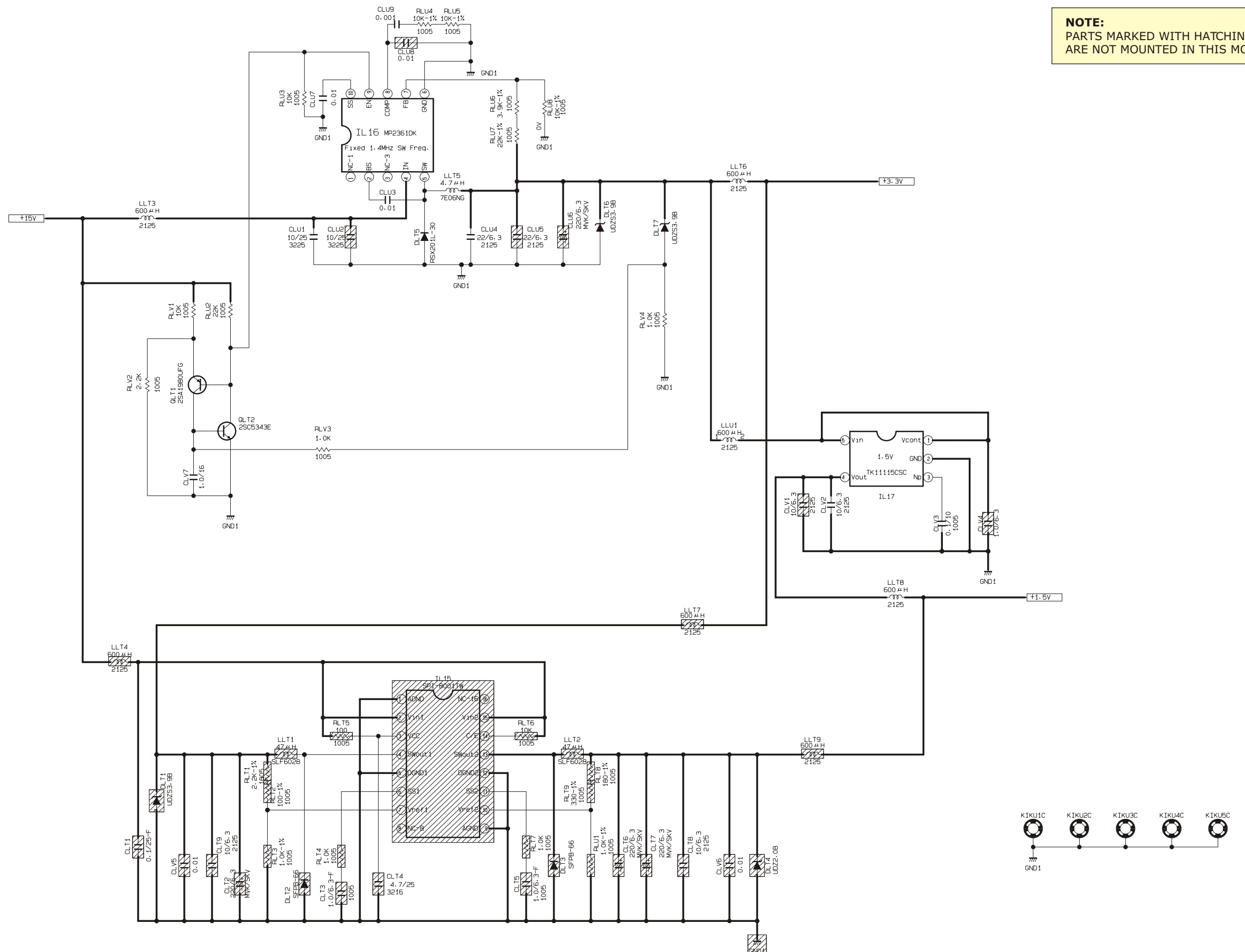
**NOTE:**  
PARTS MARKED WITH HATCHING  
ARE NOT MOUNTED IN THIS MODEL.







**NOTE:**  
PARTS MARKED WITH HATCHING  
ARE NOT MOUNTED IN THIS MODEL.



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